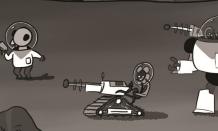
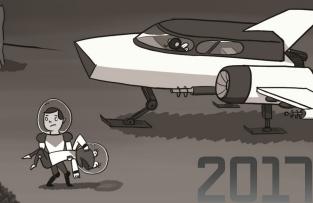


# SCIENCE TREASURE HUNT





## 2017

## Science Treasure Hunt

Thank you for participating in the 2017 Science Treasure Hunt. This year marks the 28th year of Science Treasure Hunting through a program designed to get students more involved with science and technology. Plus, the hunt gives you an opportunity to think about developing an interest in science as a career.

Mike Rucker, Chairman Science Treasure Hunt

## This Passport Belongs to:

#### Your Gift is Welcome and Needed

The Peoria Treasure Hunt is supported entirely by contributions. All funds go toward the purchase of prizes. If you would like to help keep this annual event going, please mail a tax deductable donation to:

Peoria Academy of Science
P.O. Box 3412
Peoria, Illinois 61612



#### Special thanks to our printer

American Speedy - East Peoria 240 Farmdale Rd East Peoria, IL 61611 (309) 699-3977



#### About the cover artist...

Illustrator, Shane Mabus is a professional Graphic Designer. This is the ninth year Shane has donated his whimsical and thought provoking drawing to the Peoria Academy of Science.

shanemabus@hotmail.com

#### **Table of Contents**

Rules	2-3
Prizes	4
Everyday Science Experiments	C2, C3, C8
Official Entry Form (Yellow Center Pages)	C4-C7
Astronomy Section	6
Geology Section	8
Camp Wokanda	10
Caterpillar Visitor Center	12
*Dickson Mounds Museum	14
Emiquon Preserve	16
Fon-du-Lac Farm Park	18
Forest Park Nature Center	20
Illinois Air National Guard	22
Jake Wolf Fish Hatchery	24
Luthy Botanical Gardens	26
Peoria Area First Robotics Teams	28
*Peoria Fire Department	30
Peoria Playhouse Children's Museum	32
Peoria Riverfront Museum	34
Peoria Zoo	36
*Springdale Cemetery Savanna	38
Sugar Grove Nature Center	
United States Coast Guard	42
Wheels O' Time Museum	44
Wildlife Prairie Park	46

<sup>\*</sup> New Site This Year

#### Rules

#### **Official Dates:**

Saturday April 15, 2017 — Monday, September 4, 2017

#### **Sponsor:**

The Peoria Academy of Science and the Peoria Riverfront Museum are the proud sponsors of the 28th Annual Science Treasure Hunt. The Treasure Hunt is a combination of family adventure and scavenger hunt focusing on science and technology facilities and resources in the Peoria area.

#### **Entrant Requirements:**

All entrants must be students between 1st grade and 8th grade on April 15, 2017

- 1. Visit at least eight (8) of the Science Sites featured in this Science Treasure Hunt Passport with your family or friends and find the answers for the questions at each site.
- **2.** Have your answers checked by a staff person/volunteer at each site. If your answers are correct, you will receive an official stamp or initials on that site's page in your Science Treasure Hunt Passport.
- 3. Complete eight (8) or more of the Everyday Science Experiments with your family found on pages C2, C3, and C8.
- **4. Complete the Official Entry Form** with the answer blanks for the Everyday Science Questions. The Official Entry Form (yellow pages) may be found in the center of the Passport on pages C4-C7.

#### **Wildlife Prairie Park Questions**

Passports can be stamped at the Visitor Center,

#### Adventure Store or Ticket Gate

- 1. How large can the home range of a coyote be in the wild?
- 2. What other colors of fur can a black bear have besides black?
- 3. What is the only marsupial in North America?
- 4. Where were Red-Tailed Hawks first identified?

#### **2017 Special Dates**

April 29th: Bison Blessing and Pow Wow May 13th: National Train Day May 14th: Mothers Day at the Park June 23rd: Day of Enlightenment

June 24-25th: Olde English Faire Official stamp
July 15th: Pioneer Days or Initials



#### Wildlife Prairie Park

3826 N Taylor Road Hanna City, IL 61536 309-676-0998

An adventure awaits

#### **Hours:**

Memorial Day through Labor Day 9:00am-6:30pm

#### Admission:

Adults: \$9.00 Children 3-12: \$6.00 2 & under: FREE Members: FREE

One child with passport admitted FREE with a paying adult

Visit our website www.wildlifeprairiepark.org



#### Rules

**5. Mail the Official Entry Form** (yellow pages C4-C7 only) to:

Peoria Academy of Science

P.O. Box 3412,

Peoria IL 61612

- **6. Entries must be postmarked no later than Wednesday, September 6, 2017** Only one entry per person. Entries from different members of the same family may be mailed in the same envelope.
- **7. One hundred (100) winners will be drawn at random** from the qualifying entries. Winners will be notified by mail, email or phone and are encouraged to attend the Prize Presentation. If unable to attend, the initial 100 winners may pick up their prize packet at Peoria Riverfront Museum before October 13, 2017. If a family has more than one entrant, not all entries may be selected by random drawing.
- **8.** One (1) grand prize winner and five (5) additional prize winners will be drawn at random from the 100 initial winners at the Prize Presentation and <u>MUST</u> be present in person at the Prize Presentation event.

#### **Prize Presentation Event:**

Sunday, October 1, 2017 at 2:00pm in the Peoria Riverfront Museum Auditorium (downstairs).

46

#### **Prizes**

One hundred (100) initial prize winners selected at random from the qualifying entries. One (1) Grand Prize winner and five (5) additional winners will be selected at random at the Prize Presentation from those initial prize winners who are present.

#### **Prize Presentation Event**

Sunday, October 1, 2017, 2pm

Peoria Riverfront Museum Auditorium

#### **Grand Prize:**

A fantastic NASCO Science Catalog shopping spree worth \$500.

#### 2nd Prize:

A wonderful NASCO Science Catalog shopping spree worth \$250.

#### 3rd Prize:

A great NASCO Science Catalog shopping spree worth \$125.

#### 4th, 5th & 6th Prizes:

Additional special prizes and books.

#### **Prize Sponsors:**

NASCO Science Catalog shopping sprees are provided by the Peoria Academy of Science. Additional prizes for the top six winners are provided by the following gracious Science Treasure Hunt Sites: Forest Park Nature Center, Peoria PlayHouse Children's Museum, Peoria Riverfront Museum, Peoria Zoo, Wheels O' Time Museum, and Wildlife Prairie Park.

#### Wheels O' Time Museum Questions

1. A: What fuel was used to power the model of the locomotive in the River and Rails Display?

B: What is Coal?

- 2. Why is the Gullwing Mercedes car called a "gullwing"?
- 3. What is the purpose of the large chrome ball on the front of the 1931 Ahrens Fox fire pumper? (Workshop)



Official stamp

or Initials



#### Wheels O' Time Museum

1710 West Woodside Drive Dunlap, IL 61525 309-243-9020 www.wheelsotime.org wotmuseum@aol.com

#### **Hours:**

May 3rd through October Wednesday Through Sunday Noon-5:00pm Opens May 1st

#### **Admission:**

Adults: \$7.00 (\$6.00 for groups of 20 or more) Children 3-11: \$3.50 (\$3.00 for groups of 20 or more) Children under 3: FREE One child with passport admitted FREE with each

paying adult

# Take an exciting journey into history at the Wheels O' Time Museum!



#### **Peoria Academy of Science**

Our Mission

To foster the appreciation of science, to spread

scientific knowledge and to promote scientific research.

The Peoria Academy of Science was founded in 1930 by a group of Peoria area professional and amateur scientists who wanted to host meetings of the Illinois State Academy of Science. The group hosted the state conference the next year.

The concept of a federation of science groups was so successful that within the state it became known as the Peoria Plan. It was copied in many other communities and several colleges and universities. Today, the only two remaining in Illinois are the Chicago Academy of Science and the Peoria Academy of Science.

The current sections of the Peoria Academy of Science include:

**Peoria Astronomical Society** 

Peoria Audubon Society Entomology Section

Geology Section Icl

Ichthyology Section

**Central Illinois Herpetology Society** 

The Academy has approximately 800 members within these various disciplines.

The Academy has three major projects:

The Donald Jackson Memorial Scholarship Fund,

The Science Granting Fund, and

The Science Treasure Hunt for Children.

www.peoriaacademyofscience.org

#### **Peoria Astronomical Society**



Peoria Academy of Science P.O. Box 10111 Peoria , IL 61612-0111 309-645-2433 www.astronomical.org

# Visit the Northmoor Observatory to view the sky through the 12 foot long refractor telescope! Where:

The observatory is located on the Peoria Park
District's former Donavan Golf Course, 500 feet south
of the observatory parking lot, which is accessible
from the 5800 block of Knoxville Avenue.

#### When:

On any clear Saturday evening after dark, from May 21st through October 15th.

#### **Admission:**

FREE

The heavens are within reach at the **Peoria Astronomical Society** 

#### **U.S. Coast Guard Questions**

1.	What piece of equipment is used to make the boat turn left or right?
2.	The Coast Guard continuously monitors VHF radio Channel for distress calls.
3.	What is the specific gravity of water?
4.	What is the specific gravity of gasoline?
5.	What happens to gasoline when it mixes with water?
6.	What is the MOST common method of cleaning up spilled oil in water?
7.	What are the three sides that make up the Fire  Triangle?  A B C. C Official stamp or Initials



#### U.S. Coast Guard

Marine Safety Detachment Peoria 97 Conference Center Drive East Peoria, IL 61611 309-694-7779

#### Hours:

You MUST phone ahead for reservations. Reservations are taken 9:00am-2:00pm Please call 309-694-7779 for reservations.

#### **Tour Dates:**

July 20-21st and August 10-11th 9:00am or 1:00pm

**Admission:** FREE



#### **Peoria Astronomical Society Questions**

A total Solar Eclipse is to occur August 21, 2017

- 1. In what direction is the path of the Eclipse moving?
- 2. After 2017, what is the date of the next time that the path of a total solar eclipse will cross Illinois?
- 3. What city in Illinois is on the center line for both this year's event and the next eclipse?
- 4. What other event will happen in August and be at maximum on August 13th?



Official stamp

or Initials



#### **Geology Section**

Peoria Academy of Science P.O. Box 10294 Peoria , IL 61612 309-645-3609 www.pasgeology.com

## **Geology Section Annual Show**

#### Where:

Travelodge 4400 North Brandywine Drive, Peoria, IL 61614

#### When:

Saturday, August 26th 9:00am-5:00pm Sunday, August 27th 10:00am-5:00pm

#### Admission:

**FREE** 

Have your passport stamped and be amazed at the beautiful and intriguing minerals and fossils on display during this educational event. You will remember this event for years!

#### **Meetings:**

Fourth Tuesday of the month at 7:00pm at Forest Park Nature Center, Peoria Heights. The public is welcome!

#### **Sugar Grove Nature Center Questions**

1. Name one type of plant in the Monarch Waystation Garden (hint: look on the Nature Center lawn).

2. What are two differences between salamanders and lizards (hint: look in Critter Corner)?

3. When the Carolina Wren sings, what does it sound like it is saying (hint: look in Bird Viewing

Room)?

4. This is the normal spelling for "maple syrup". In Funk Grove, we spell it differently. How is it spelled (hint: look at Funk Grove Nature Quest game)?

5. Go to the Corn Crib (the white barn-like structure behind the Nature Center) and look for a small red door. The combination is 555. Inside you will find a stamp and ink pad to mark this page!



Official stamp

or	<b>Initials</b>



#### **Sugar Grove Nature Center**

4532 N 725 East Road McLean, IL 61754 309-874-2174

#### **Hours:**

Tuesday-Friday 9:00am-5:00pm Saturday 10:00am-3:00pm Sunday Noon-4:00pm Grounds, Trails, and Imagination Grove open daily from dawn until dusk See our website for winter hours

#### **Admission:**

#### **FREE**

Groups of 10 or more required to make a reservation and pay a nominal fee.

In addition to our Nature Center, 7 miles of trails, and Imagination Grove (our nature play area), we also offer a wide variety of programs throughout the year for all ages.

For more information and directions visit:

www.sugargrovenaturecenter.org

(Do not use MapQuest since it is incorrect)



#### **Geology Section Questions**

- 1. Which species of triceratops is on display?
  - A. Triceratops horridus
  - B. Triceratops prorsus
- 2. Who first discussed the triceratops as a new species in the 1890 American Journal of Science?
  - A. O.C. Marsh
  - B. E.D. Cope
- 3. What is the average length of a triceratops?



Official stamp or Initials





#### Camp Wokanda

Peoria Park District 620 East Boy Scout Road Chillicothe, IL 61523 (309)579-2157 www.peoriaparks.org

#### **Hours of Operation:**

Dawn to Dusk

Staff usually on site Monday-Friday 9:00am-3:30pm Saturday & Sunday Hours vary

(If not at Camp Office, there is a contact phone number on the door for anyone to call)

#### **Directions:**

To get to Camp Wokanda from Peoria, take Route 29 north and turn left on Old Galena Road just north of Route 6.

Follow this past Mossville Grade School, then turn left on Boy Scout Road and proceed to the park entrance.

Camp Wokanda is a 267 acre woodland setting including a lake, trails, dining hall, cabins, program buildings and tent camping. Since 1936, Wokanda has been building memories "around" the glow and warmth of a campfire. Our cabins offer groups with excellent base camp to explore the natural beauty of Central Illinois' wooded bluffs. In the process, campers learn a little bit more about their role in the natural world. Get back to nature! We offer fishing, hiking, canoeing, cabin and tent rentals, special events, venue rentals, educational classes, scout badges and more!

Plan a PADDLE PARTY today for only \$10 per canoe rental!

#### **Springdale Cemetery Savanna Questions**

Two types of plants are native to the sevenne. These

Sign 1. "Savanna Plants" (near Saltzenstein & Lehmann Mausoleum)

1.	are:&
2.	What is the name for the Flowering Plants?
Sig	n 2: "Savanna" (along the road)
1.	There are two species of oak trees within the savanna. There are: oak and oak
2.	Try to find a leaf of each type of oak either on the ground or on a tree and compare them to the pictures of the oak leaves on the sign.
Sig	n 3: "Prairie Roots and Storm Water Filtration" (along the road)
1.	How deep do some of the native plants send their roots into the soil?feet
2.	How deep do the roots of the turf grass go into the ground?  feet
3.	Which type of plant does the better job at reducing rain runoff and erosion?
	andary Signs (any of the small signs titled "Springdale Cemetery ranna")  Official stamp
1.	How many years has the Savanna been or Initials
	in existence?years



#### **Springdale Cemetery Savanna**

Historic Springdale Cemetery 3014 N Prospect Road Peoria, IL 61603 309-681-1400

#### Hours:

Office Open Monday-Friday 8am-4:30pm Site may be visited during times when office is closed

#### Admission:

**FREE** 

#### **Instructions:**

Stop by the office just inside the cemetery gate. You may obtain a map to the Savanna Grass site from the office staff or from the map container on the outside of the building. Visit the site, walk the paths through it and observe the plants. Read the informational signs to obtain answers to the questions. You may take your passport to the office to have it stamped or, if the office is closed, an adult accompanying the child may initial the passport page.

This is a rare remnant of tallgrass oak savanna, a natural ecosystem that was once dominant along parts of the Illinois River bluffs.

Nearly twenty years ago Peoria Wilds volunteers began a process of ecological restoration here. Efforts focus on encouraging native forbs and grasses through the removal of invasive weeds, brush cutting, prescribed burns and the use of seeds from native plants.

#### **Camp Wokanda Questions**

- 1. Which cabin do you have to cross a creek and a bridge to get to?
- 2. Name 2 other Peoria Park District Parks that the Illinois River Bluff Trails goes through?
- 3. How many sides does an "Adirondack" have?
- 4. What species of tree is located in the middle of the main parking lot?

This is an "Honor Site". If no staff person is available an adult who has accompanied the student may initial.



www.facebook.com/CampWokanda

Show your child's 2017 Passport and get 25% off of a rental at Camp Wokanda!

Offer valid through 03/01/2018.

One coupon per customer per season.

\*\*Not applicable to already discounted rates, venue rentals or

entire camp rentals. \*\*

Official stamp
or Initials

38

#### **Caterpillar Visitors Center**



110 SW Washington Street Peoria, IL 61602 (309)675-0606 www.visitcaterpillar.com

#### **Hours:**

Monday-Saturday 10:00am-5:00pm Last ticket sale and entry is at 3:30pm

#### **Admission:**

General Admission: \$7.00 Seniors (55+): \$6.00

Active Military and Veterans: \$6.00

Military(55+): \$5.00

Children 12 and under accompanied by an adult:

**FREE** 

(Limit 4 per 1 adult ticket)

#### \$1.00 off admission

Limit one per person. Coupon Code: Science Expires 9/20/2017

#### **Peoria Zoo Questions**

Look for Science Treasure Hunt on signs to help find your answers!

- 1. Why do giraffes have a dark colored tongue?
- 2. What amphibian in the Conservation Center is only found in Lake Xochimilco in central Mexico?
- 3. Name the only two venomous lizard species living today. Peoria Zoo has both species in the animal collection.

\_\_\_&\_\_

#### What's New at the Zoo?

Memorial Day through Labor Day
Daily Keeper Chats
Zoo camp starts June 5th
Grades K-8 register now!
Call 681-3559 for details

Offi	cia	1	st	ar	np	
	-			,		

or	Initials

12



#### Peoria Zoo

2320 North Prospect Road Peoria, IL 61603 309-686-3365 www.peoriazoo.org

#### Mission:

To create connections that inspire an appreciation for the natural world.

#### Hours:

Daily 10:00am-5:00pm Gate closes at 4:30pm

#### **Admission:**

\$9.50 adults; \$6.50 Children (2-12) \$8.50 Seniors/Active Military Members FREE



#### **Stay in Touch:**

Become our friend on Facebook Visit www.peoriazoo.org Find us on Instagram @peoriazoo

#### **Caterpillar Visitors Center Questions**

1.	Caterpillar began as two separate companies:
	with a similar vision - to build an amazing track- type tractor.
2.	Caterpillar works with approximately
	suppliers in over countries that are considered an extension of the Caterpillar global network.
3.	Caterpillar power solutions keep communities, like the one shown in this model, running every day. Push the button and see what happens.
4.	Name two pieces of Cat® equipment on display at the Caterpillar Visitors Center.



Official stamp or Initials

or Initials



#### **Dickson Mounds Museum**

10956 N Dickson Mounds Rd Lewistown, IL 61542 309-547-3721

#### **Hours:**

Daily 8:30am-5:00pm

#### Admission:

FREE, donations appreciated

The Dickson Mounds Museum, a branch of the Illinois State Museum and a National Historic Site, is one of the major on-site archaeological museums in the United States. It offers a unique opportunity to explore the world of the American Indian in an awe inspiring journey through 12,000 years of human experience in the Illinois River Valley. Visitors to the museum, in west-central Illinois, encounter innovative interpretive exhibits; exciting hands-on activities; archaeological sites; and a variety of special events in a rural setting.

#### **Peoria Riverfront Museum Questions**

1.	Visit our Illinois River gallery and learn about some of the
	wildlife in our area. One species is the wild turkey. How
	many feathers cover a wild turkey?

2.	Many different elements occur in Earth's crust. Which two
	elements comprise 80%? (Visit the mineral display case near
	the planetarium to find out)

- 3. Why do abalone shells have holes in them? (Visit the shell display case near the planetarium to find out.)
- 4. Corn, or maize, was domesticated 6,300 years ago from what wild plant in Mexico? (Visit the Street History Gallery to find out.)

For a full list of museum hours, show schedules, and admission prices, visit our website:

#### www.PeoriaRiverfrontMuseum.org



Official stamp or Initials



#### **Peoria Riverfront Museum**

222 SW Washington Street Peoria, IL 61602 309-686-7000

### RIVERFRONT MUSEUM

#### **Hours:**

Through May 28th
Tuesday-Saturday 10am-5pm • Sunday Noon-5pm
May 29th through September 4th
Monday-Saturday 10am-5pm • Sunday Noon-5pm

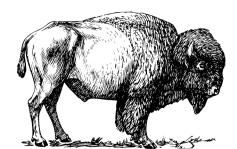
#### Admission:

Members- FREE
Non-members
Adults (18-59) \$11.00 • Children (3-17) \$9.00
Seniors (60+) & Students (with college ID) \$10.00
There is an additional charge for special exhibitions.
One child with passport admitted free with each paying adult (includes special exhibitions).

Visit Peoria's past in *The Street*, explore the *Illinois River Encounter*, and engage young minds in *Discovery Worlds*. Enjoy art exhibits in our *International Gallery* and *Folk Art Gallery*. Challenge yourself in the *Peak Performance Center*. Experience the *Giant Screen Theater* on a screen that's five stories tall and seven stories wide, and get a glimpse into infinity and beyond in the *Dome Planetarium*. There's something for everyone at Peoria Riverfront Museum.

#### **Dickson Mounds Museum Questions**

- 1. Name three of the animals that the first Native Americans saw here but have since disappeared.
- 2. What is the shiny polish that accumulates on stone when used to dig dirt?
- 3. The trunk of this tree used to make a giant post at the Mitchell site.
- 4. The shoulder blade (scapula) of this animal was used to cultivate gardens.



Official stamp



#### **Emiquon Preserve**

Nature Conservancy 11304 North Prairie Road Lewistown, IL 61542 (309)547-2730 www.nature.org/illinois

#### **Hours of Operation:**

Sunrise to Sunset

#### **Directions:**

Access to the preserve and the lake is provided through the Visitor Use Observatories located along Illinois State Route 78/97. The GPS coordinates are: 40°21'3.27"N latitude 90°5'10.95"W longitude. Look for the sign below just off of IL Route 78/97. Facilities within the observatories include boardwalks, canoe and boat launches, hiking trail observation deck, pavilions and interpretive signage.

Once ranked among the biologically richest wetlands in the world, The Nature Conservancy's 6,700-acre Emiquon Preserve holds vast floodplains, upland forests and tall grass prairies that have attracted people to this area for more than 12,000 years, Emiquon is a place of mystery and legend with strong connections to the past.



#### Peoria PlayHouse Children's Museum Questions

- 1. Head to the Sci Lab and challenge yourself to make the most creative structure you can in 3 minutes using Duplo blocks and/or Keva Planks at the building station. What where you able to make?
- 2. While you are in the Sci Lab, go over to the DNA interactive. Use the sliders to make a person and see how they look. What did your person look like based on their DNA? Bonus: take a look at one of the books about DNA!?
- 3. Go over to the water table, *By Your River Gently Flowing*, which is inspired by the real Illinois River. Can you name three different river animals that are there?



Explore. Play. Imagine. Create

Official stamp

or Initials

16

#### Peoria PlayHouse Children's Museum



2218 N Prospect Rd Peoria, IL 61603 (309)323-6900 www.peoriaplayhouse.org

#### Hours:

Monday, Wednesday-Saturday: 9:00am-4:00pm

Member Tuesday: 9am-noon Sunday: 12:00pm-4:00pm

The PlayHouse is closed Tuesday afternoons

#### Admission:

General Admission: \$8.00

Seniors (65+): \$7

Children under 1: FREE



#### **Emiquon Preserve Questions**

1.	By 1918, Thompson Lake's phenomenal hunting
	and fishing were declining due to what two factors?
	(Located in the Lakeside Observation Pavilion)

- 2. The present day Illinois River Valley was first carved by what river? (Located on the Lakeside Observatory Boardwalk)
- 3. Name two fish-eating birds you might find at Emiquon. (Located in the Wetland Observatory Pavilion)

This is a "Honor Site". Adults accompanying the child are to initial the box.

\*Like" us on Facebook

www.facebook.com/thenatureconservancy

or Initials

Official stamp



#### Fon du Lac Farm Park

305 Neumann Drive East Peoria, IL 61611 309-694-2195 info@fondulacpark.com

#### Fon du Lac Park District

#### **Spring Hours:**

April 10th - May 26th Monday - Friday 9:00am-3:00pm (Closed Weekends) Summer Hours:

> May 27th - September 4th Tuesday - Sunday 9:00am-3:00pm (Closed Mondays except for Holidays)

#### Admission:

Adults \$3.00; Children 1-15 \$2.50 One child with passport admitted FREE with each paying adult.

Since 1981 the Farm Park has been a treasured destination for school children and families. The park offers a variety of outdoor activities that a child would have experienced living on a farm in the early 1920's. Visit the gift store and the concession stand.

Handicap accessible.

#### **Peoria Fire Department Questions**

- 1. If you find yourself in a smoke-filled room and want to open a door, what should you do first?
- 2. If your clothes catch fire what should you do?
- 3. Where are the smoke detectors in your home?

When were the batteries last changed?



Official stamp



#### **Peoria Fire Department**

Central Fire Station 505 NE Monroe St Peoria IL, 61603 309-494-8700 or 309-494-8727

#### Tour the Firehouse

**Hours:** Monday Through Friday 7am-4pm

**Admission:** Free

Must call administration office at 309-494-8700 to make reservations. Ask for Gwen and mention the Science Treasure Hunt.

Participants will receive a special certificate of training suitable for framing signed by the fire chief!



#### Fon du Lac Farm Park Questions

Have you ever held an earthworm in the palm of your hand and watched it twist and curve itself in every direction? That's because earthworms are animals with no backbones.

- 1. What is this group of animals called?
- 2. How are earthworms born?
- 3. Where can you find earthworms?
- 4. Earthworms don't have a lot of body parts. How do they breathe?
- 5. What is worm poop called?
- 6. Why is worm poop so valuable to gardeners?
- 7. Bonus Question– If you cut a worm in half, will you have 2 living worms? Yes No



Official stamp or Initials





#### **Forest Park Nature Center**

5809 Forest Park Drive Peoria Heights, IL 61616 (309)686-3360 www.peoriaparks.org

#### Hours:

URE CENTER Monday-Saturday 9:00am-5:00pm Sunday 1:00pm-5:00pm

#### Admission:

**FREE** 

Enjoy 7 miles of hiking trails, 540 acres of dedicated Illinois State Nature Preserve, Interpretive Center, interactive exhibits and the Trailhead Nature Store. Pick up a copy of our latest newsletter, *Tracks and Trails*, for all the latest nature news and program information.

#### Plan a Woodland Birthday Party!

Forest Park Nature Center is a great place to have your Birthday Party. A naturalist will lead your group on an exciting hike to explore the forest! You then have exclusive use of our woodland picnic area to open presents and enjoy refreshments.

The birthday girl or boy will receive a \$2.00 gift certificate from

the Trailhead Nature Store.

Invitations are provided.

Birthday Party packages start at \$60.00. Call and schedule yours today!

#### **Peoria Area FIRST Robotics Teams Questions**

1.	What is a robot? A robot is a,
	especially one programmable by a
	which is capable of carrying out a series of
	automatically.
_	XXII

- 2. What is the origin of the term robot? The term derived from a Slavonic word "robota" meaning
- 3. In modern automobile manufacturing factories robots can do virtually any task a human worker can do except? \_\_\_\_\_
  - a. Installing windshields
  - b. Putting on wheels
  - c. Pulling wires through the frame and connecting them on each end.
- 4. Does a robot have to have human-like hands? Yes NO



Official stamp or Initials

FIRST Robotics Team 1736

#### Peoria Area FIRST Robotics Teams



www.robotcasserole.org www.firstinspires.org

### RoboRumble

#### Where:

Peoria Riverfront Museum 222 SW Water Street, Peoria, IL 61602

When:

Saturday, June 24th 12:00pm-4:00pm

**Admission: Free** 

#### Sponsored by Peoria Area FIRST Robotics Teams

Come join several area robotics teams at the Peoria Riverfront Museum for robot demonstrations, interactive hands on activities, Lego Mindstorms robots, and science and technology displays.

Learn more at www.robotcasserole.org and www.firstinspires.org

#### **Forest Park Nature Center Questions**

- 1. Which of the following are you NOT allowed to do in the Nature Preserve?
  - A. Bring your dog for a walk, pick wildflowers, and go camping
  - B. Hike the trails and bird watch
  - C. Observe wildlife and identify trees
- 2. What's one book for sale in the Trailhead Nature Store that can help people learn more about wildflowers?
- 3. Name one living thing that enjoys the abundant supply of light and nutrients that follow a controlled burn.





Official stamp or Initials

28



#### Illinois Air National Guard

182nd Airlift Wing 2416 South Falcon Blvd. Peoria, IL 61607 (309)633-5118

#### Hours:

Must phone ahead at least one week in advance to schedule a tour of the base.

Tours are scheduled at 9:00am or 1:00pm Tuesday and Thursday only on a first come first reserved basis.

Please call 309-633-5118 to schedule a time.

#### Admission:

Tours are FREE of charge

#### Tours:

Tours consist of Aircrew Flight Equipment shop, Fire House, Aircraft Maintenance and the C-130 Aircraft.



#### **Luthy Botanical Garden Questions**

- Within the Conservatory: Find the banana tree.
   Approximately how many individual banana trees can you count?
   Find the Bird of Paradise plant. How many flowers can you count on this plant?
   Find the lemon tree. How many large lemons can you count on this tree?
- 2. Within the Conservatory: find the plant with the scientific name "Dieffenbachia amoena". If the leaves of this plant are chewed one's tongue can swell up and the person may be temporarily unable to speak and could possibly even choke to death. What is the common name for this attractive plant which is found in many homes and offices?
- 3. Along the north side of the building: find the tall grass with the scientific name "Miscanthus giganteus". This grass is a great source of alternative fuel and can produce four times more ethanol per acre than corn.

This is an "Honor Site". If a Luthy staff person is available you may ask that person to initial this passport page. If no staff person is available an adult who has accompanied the student may initial.

Official sta	mp
or Initial	S



#### **Luthy Botanical Garden**

2520 N. Prospect Road Peoria, IL 61603 309-681-3506

#### **Hours:**

10:00am – 5:00pm Daily

Admission:

No admission fee. Contributions are welcomed



#### **2017 Special Events:**

Open Memorial Day- May 30th Star Wars Day, Father's Day–June 18th (Fathers & Grandfathers are free) Open July 4th Open Labor Day

Princess & Pirate Weekend—Sept 16th-17th French Market in the Park-Oct 7th Hogwarts Botanical Garden Chrysanthemum Show October 6th-29th

Hall-Zoo-ween- October 12th-14th Poinsettia Show- November 17th-December 31st Candle Light Walks-November 17th-December 23rd (6pm-9pm, Friday & Saturday ONLY) Kwanzaa December 26th-31st Check out our website for more information:

www.peoriaparks.org/Luthy-botanical - garden

#### Illinois Air National Guard Questions

- 1. Examine the wings of our C-130 aircraft. As the craft moves through the air what forces does the air produce to the underside of the wing to permit it to
- Why should water NOT be used to extinguish a gasoline fire?
- 3. Why should water NOT be used to extinguish an electrical fire?
- What substance, other than water do airport firefighters use to extinguish fuel fires?
- 5. How often should the batteries in your home smoke detectors be checked and changed, if necessary?\_



Official stamp or Initials

# **2017 Science Treasure Hunt Important Dates**

#### **Start Date:**

Saturday, April 15, 2017

#### **Final Date:**

Monday September 4, 2017

#### **Final Submission Postmark Date:**

Wednesday, September 6, 2017

#### **Presentation Event:**

Sunday, October 1, 2017, 2pm

An explanation for each Everyday Science Experiment will be posted, after the contest ends, on the Peoria Academy of Science website:

www.peoriaacademyofscience.org

#### **Jake Wolf Fish Hatchery Questions**

- 1. Name one part of a fish that can be used to determine how old it is?
- 2. What is the name of the long net used by fisherman to capture fish in a lake or river?
- 3. What type of aquatic animal found in the Illinois River can be used to help produce pearls?
- 4. What is the State Fish of Illinois?



Official stamp



#### **Jake Wolf Fish Hatchery**

25410 Fish Hatchery Road Topeka, IL 61567 309-968-7531 steve.krueger@illinois.gov

#### Hours:

8:00am-3:30pm

Visitor Center is open seven days a week, except for Illinois state holidays. No need to phone, unless a guided tour is desired.

#### **Admission:**

**FREE** 

#### **Directions:**

From Peoria area, take Illinois Route 29 south through Pekin, turn right on the Manito blacktop into Manito. Take the first right past the Country Companies building onto County Road 2500 North.

Follow 2500 North for five miles and turn right at the Jake Wolf sign. Follow the lane to the Jake Wolf Fish Hatchery.

For questions regarding the Treasure Hunt, please inquire at the office located in the back of the Visitor Center.

#### 2017 Science Treasure Hunt Everyday Science Experiments

Remember to answer the questions on page C5 & C6

#### 1. Float the M&M Letters

**Supplies:** a packet of M&M candies, two bowls, warm tap water, and cool tap water.

What to do: Pour about 1 1/2 in. of cool tap water into one bowl, pour the same amount of warm water in the other bowl. Place the M&M candies under water in each bowl with "M" facing up. Watch what happens. It should take about 5 to 10 minutes.

#### 2. Exploding Sandwich Bag

**Supplies:** One sandwich size zip-lock bag, baking soda, warm water, vinegar, measuring cup, short length of toilet paper.

What to do: Go outside or at least do this in the bath tub. Put

What to do: Go outside-or at least do this in the bath tub. Put 1/4 cup of rather warm water in the bag. Add 1/2 cup of vinegar to the water in the bag. Put 3 teaspoons of baking soda into the middle of the toilet paper. Wrap the baking soda up into the paper by folding the paper around it. You will have to work fast now—partially zip the bag closed but leave enough space to add the baking soda packet. Put the baking soda packet into the bag and quickly zip the bag closed. Put the bag in the tub or down on the ground (outside) and step back.

#### 3. A Colorful Iceberg

**Supplies:** An ice cube tray or small plastic container to make one or more colored ice cubes, food coloring, hot tap water, a large clear container.

What to do: Add some food coloring to tap water and pour it into the ice cube tray or small plastic container. Place the tray in the freezer overnight to make ice cubes. Fill the large clear container with hot tap water. Place ice cube into the hot water.

#### 4. An Underwater Volcano

**Supplies:** Food coloring, tap water, a small clear drinking glass or jar, a large clear container, plastic wrap, a rubber band, and a pencil with a sharp point.

What to do: Fill the large container with cold water and place it in the refrigerator for a few hours, fill the small clear glass with hot tap water and add food coloring. Cover the small glass with clear plastic food wrap and secure it with a rubber band. Place the small container at the bottom of the large container of cold water.. Use the pencil point to pierce the plastic food wrap. Observe.

#### 5. The "Bent" Straw

**Supplies:** A clear glass, drinking straw (or pencil), and tap water. **What to do:** A: With the glass empty look through the glass at the straw. B: Fill the glass half full of water and look through the glass at the straw. Focus on the point where the straw enters the water.

#### 6. Blobs in a Bottle

**Supplies:** A clean 1 liter clear soda bottle, tap water, vegetable oil, fizzing tablets (such as Alka Seltzer), and food coloring.

What to do: Pour the water into the bottle until it is about 3/4 full. Use a measuring cup or funnel to slowly pour oil into the bottle until it's almost full. You may have to wait a few minutes for the oil and water to separate. Add about 10 drops of food coloring to the bottle (red is nice, but any color will look great.) The drops will pass through the oil and then mix with the water below. Break a seltzer tablet in half and drop the half tablet into the bottle. Watch it sink to the bottom and let the blobby greatness begin! To keep the effect going, just add another tablet piece for a true lava lamp.

#### 7. Make a Needle Float

**Supplies:** A sewing needle, tissue paper, bowl of water, a pencil. **What to do:** Fill the bowl with water. Trim a piece of tissue paper to a size slightly longer that the needle. GENTLY drop the tissue

flat onto the surface of the water. Then GENTLY place the needle flat onto the tissue (Try not to touch the water or the tissue. A tweezers is nice to use for this.) Use the pencil to carefully poke the tissue (not the needle) until the tissue sinks.

#### 8. Is Black Hotter than White?

**Supplies:** 2 Equal sized coffee mugs, cool tap water, white paper, black paper, 2 rubber bands.

What to do: Fill both mugs with the same amount of water. Wrap the edges of one mug with white paper and the other mug with black paper. Secure both pieces of paper with a rubber band. Leave the mugs in direct sunlight for one hour. When you return, measure the temperatures of the water in both mugs by placing your finger in the water of each one.

#### 9. Swirling Colors

**Supplies:** A large clear glass or jar, a small container, food coloring, warm tap water, 3 tablespoons of vegetable oil.

What to do: Fill the jar about 3/4 full with warm water. Put three tablespoons of vegetable oil in the small container. Carefully put drops of various colored food coloring into the oil. Stir the oil gently with a fork, just enough to disperse the food coloring a little bit. You'll notice it doesn't mix with the oil, it just breaks up into smaller dots. Now pour the oily and color mixture into the warm water in your jar.

#### 10. Float your own Boat

**Supplies:** Aluminum foil, sink or container of water, lots of pennies or other coins.

What to do: Tear off several squares of foil each about one-foot square. Fold and crinkle the foil into the shape of a boat. Place coins one-by-one into the boat. Count how many coins you can put into your boat before it sinks. Make another boat and see how many it will hold before sinking.

# **2017 Science Treasure Hunt Sites Check all the sites you visited this year**

☐ Astronomy Section
☐ Geology Section
☐ Camp Wokanda
☐ Caterpillar Visitor Center
☐ Dickson Mounds Museum
☐ Emiquon
☐ Fon-du-Lac Farm Park
☐ Forest Park Nature Center
☐ Illinois Air National Guard
☐ Jake Wolf Fish Hatchery
☐ Luthy Botanical Gardens
☐ Peoria Area First Robotics Teams
☐ Peoria Fire Department
☐ Peoria Playhouse Children's Museum
☐ Peoria Riverfront Museum
☐ Peoria Zoo
☐ Springdale Cemetery Savanna
☐ Sugar Grove Nature Center
☐ United States Coast Guard
☐ Wheels O' Time Museum
☐ Wildlife Prairie Park

Circle your two (2) favorite sites.

### 2017 Science Treasure Hunt Official Entry Form

(Piease Prin	t Neatty)	
Participant <sup>2</sup>	s Name	
Age	School	
Address		
		Zip
E-Mail (for	notification only)	
Families sho	ould designate a primary	contact person below:
	]	Phone
Hunt Passpo	: I have checked the pages rt and verify that this bool om a minimum of eight (8)	contains the site stamps
Signature_		
At Science S		

Mail to: Peoria Academy of Science
P.O. Box 3412
Peoria, IL 61612

Must be post-marked no later than Wednesday, September 6, 2017.

### 2017 Science Treasure Hunt Official Answer Form

Please check one for each question

1.	Float the M & M Letters  A. What happened?  Nothing happened  The letter "M" on each candy eventually peeled off and floated to the surface  B. In which bowl did the letters float to the surface first?  The cool water  The warm water
2.	The Exploding Sandwich Bag  ☐ The bag swelled up and popped ☐ Nothing happened ☐ I just made a terrible mess!
3.	A Colorful Iceberg  As the ice cube melted the colored water from it:  ☐ Sank to the bottom of the hot water  ☐ Just melted
4.	An under Water Volcano $ \Box A \text{ "volcano" erupted through the hole in the food wrap } \Box \text{Nothing happened} $

5. The "bent" Straw
A. With the glass empty the straw appears:
☐ Straight ☐ Bent
B. With the glass half full of water at the point where the straw enters the water it appears:  Straight Bent
6. Blobs in a Bottle
☐ Yes! We got blobs
☐ We got just a mess
7. Make a Needle Float
<ul> <li>□ The needle stayed on the surface of the water</li> <li>□ The needle always sank</li> </ul>
3. Is Black Hotter than White?
☐ The water was warmer in the black covered mug
☐ The water was warmer in the white covered mug
9. Swirling Colors
□ Nothing happened
☐ The colors swirled around in a pretty pattern
10. Float Your Own Boat
A. My first boat held coins before it sank
B. My second boat held coins before it sank

C5