The flash of light from the time machine drops you off in front of a pair of massive doors! In front of the doors floats a massive pufferfish. Wait is that an ELDER GUARDIAN! I’ve heard they often guard underwater monuments! The guardian turns it’s massive eye towards you and points you towards a nearby pillar. On the pillar are 6 challenges to open the doors to Atlantis! Professor Evan must be waiting for you inside, the quest was never about finding keys → it was about learning! Knowledge is the key!

The challenges may seem scary, but you’ve learned everything you need to know. And Professor Evan has even left you some of his notes to help.

**Challenge 1: Decipher The Code**
- Hint: Use the skills you learned in episode 1. Attached you will find instructions on how to make and use a cipher wheel to solve the message!

```
Hkltibadb fp qkb hbv!
```

**Challenge 2: Deduction**
- Hint: Use the skills you learned in episode 3

**Grades K-4:**

There are three houses in a row, the house on the left is infected with Cholera, find who is infected.

1. Mr. Smith lives directly to the right of the Red house
2. Miss Johnson lives in the the blue house
3. Mrs. Doe lives in the middle house

<table>
<thead>
<tr>
<th>House Color</th>
<th>Left House</th>
<th>Middle House</th>
<th>Right House</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
Science Sleuths - A SCI-FI Science Adventure

**Grades 5-8:**
There are three houses in a row, each with different characteristics, these characteristics are:
- a. Color of House (Green, Blue, Red)
- b. Name of Person (James, Jane, Judy)
- c. Animal owned (Fish, Dog, Cat)
- d. Sport played (Basketball, Soccer, Football)

You need to find the person’s house that is the source of the Cholera Outbreak, you know that the person who likes Soccer lives in the house that is the source.

The clues that will lead to your answer are:
1. James does not live in the middle house.
2. The person with Dogs plays Basketball.
3. The red house is on the right, and is not neighbors with the person who plays football.
4. The person with the Cats lives in the middle house.
5. The person with Fish lives directly to the left of the person with Cats.
6. The person with the Dogs lives directly to the right of the Green house.
7. Judy lives in the right house.

<table>
<thead>
<tr>
<th></th>
<th>Left House</th>
<th>Middle House</th>
<th>Right House</th>
</tr>
</thead>
<tbody>
<tr>
<td>House Color</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sport</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Challenge 3: Aquatic Animals**
- Part of caring for the earth is learning about the incredible plants and animals that we share it with. Aquatic habitats are home to many amazing animals that need to be protected.

**Grades K-4:** Construct an origami whale using the attached materials.

**Grades 5-8:** Construct an origami dolphin using the attached materials.

**Challenge 4: Star Knowledge**
Humans have always liked looking at the stars, and many different cultures have their own stories and star patterns, some of which are even used to help people find their way home.
<table>
<thead>
<tr>
<th><strong>Grades K-4:</strong></th>
<th>Solve the Constellation Connect activity (attached)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grades 5-8:</strong></td>
<td>Solve the Constellation Matching activity (attached)</td>
</tr>
</tbody>
</table>

**Challenge 5: Water (This activity needs to be done with a parent / guardian)**

It's time to get outside! So find a parent / guardian and visit a local park, river, or wetland and see how many things you can find from the attached wetland scavenger hunt.

Remember to stay with a trusted adult, be safe around the water, and to be kind to the plants and animals who make their home here!

**Challenge 6: Solve The Morse Code**

**Grades K-4:**

```
.-. .-. .. -. ...    .-... .. .- 
```

**Grades 5-8:**

```
.-. .-. .. -. ...    .-... .. .- 
```

Professor Evan left a clue behind…
You've done it! The guardian moves aside and a bright blue light shines out as the doors open. Now you can finally join Professor Evan and solve the mysteries of Atlantis together!

Professor Evan and the Science Sleuths will return with Season 2...
Science Sleuths - A SCI-FI Science Adventure

Attached Items Needed:

Challenge 1.

Cypher Set-up

- Step 1: Cut out the smaller circle and the larger circle
- Step 2: Place the smaller circle on top of the larger circle
- Step 3: Fasten the smaller circle to the larger circle by stabbing a pin or pencil through the center black dots
- Step 4: Spin the circles until the outer letter A matches with the inner letter A
- Step 5: Spin the inner circle 3 spaces clockwise (After, the outer circle letter A will match the inner letter X)

How to Use the Circle Cypher

- The Inner circle letters are the letters from the coded word (the word that makes no sense)
- The Outer circle letters are the letters that will form the REAL word (the word that does make sense)
- To decode the word EBIIL, find the E in the inner circle and see that it lines up with the H outer circle (so now you know the first letter of the REAL word is H)
- Following the same pattern with the other letters you would see that the REAL word is HELLO.
- You have now learned how to use the circle cypher!
Science Sleuths - A SCI-FI Science Adventure
Science Sleuths - A SCI-FI Science Adventure

Challenge 3, K-4:

1. Fold the paper in half and then unfold it.
2. Fold the bottom of the paper up along the dotted line.
3. Turn the paper over.
4. Fold the top and bottom in along the dotted lines.
5. Fold the top and side in along the dotted lines then turn the paper over.
6. Fold the tail up a little bit.
Science Sleuths - A SCI-FI Science Adventure

Challenge 3, 5-8:

Dolphin

This model is simple enough to make a whole school of dolphins... even while in class!

1. Fold a colored Waterbomb Base. For help, consult the cloud.
2. Valley-fold the front flap. Exact placement is not important.
3. Valley-fold
4. Valley-fold to make the dorsal fin. There is no guideline here; fold to taste.
5. Valley-fold.
6. Pleat.
7. Reverse-fold.
8. Reverse-fold the inner flap only.
9. Shape the dolphin to taste with valley folds.
10. Turn over.
11. The Dolphin ready to swim away.
Science Sleuths - A SCI-FI Science Adventure

Little Dipper

1 2 3 4 5 6 7
Science Sleuths - A SCI-FI Science Adventure

Cassiopeia

1
2
3
4
5
Science Sleuths - A SCI-FI Science Adventure

Orion

Diagram of star constellations with numbers labeled from 1 to 13.
Science Sleuths - A SCI-FI Science Adventure
Photocopy these patterns and cut out along the dotted line. Tape or glue each one to a 3x5 card.
Science Sleuths - A SCI-FI Science Adventure

Star Patterns

Look at the Constellation cards. Match each pattern on this page to one of the cards. To help you get started, look at Pattern A and Constellation Card 7 (Big Dipper).

Each dot stands for a star. Star patterns are called constellations. This page shows constellations you can find in winter.

A. Big Dipper

B. 

C. 

D. 

E. 

F. 

G. 

Source: https://airandspace.si.edu/files/pdf/explore-and-learn/teaching-posters/skyquest.pdf
**Science Sleuths - A SCI-FI Science Adventure**

Challenge 5:

---

**Wetland Scavenger Hunt**

Explore a swamp, marsh or pond near you and see how many of these items you can find!

<table>
<thead>
<tr>
<th>A Frog or Toad</th>
<th>A Turtle</th>
<th>Plants under water</th>
<th>Cattails</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Frog" /></td>
<td><img src="image2" alt="Turtle" /></td>
<td><img src="image3" alt="Plants" /></td>
<td><img src="image4" alt="Cattails" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plants floating on the surface of the water</th>
<th>A bird in the water</th>
<th>Animal tracks</th>
<th>An animal home</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5" alt="Water Plants" /></td>
<td><img src="image6" alt="Bird" /></td>
<td><img src="image7" alt="Animal Tracks" /></td>
<td><img src="image8" alt="Animal Home" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A damselfly</th>
<th>A dragonfly</th>
<th>A water beetle</th>
<th>A plant that grows straight out of the water</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image9" alt="Damselfly" /></td>
<td><img src="image10" alt="Dragonfly" /></td>
<td><img src="image11" alt="Water Beetle" /></td>
<td><img src="image12" alt="Plant" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bubbles or ripples in the water</th>
<th>A Fish</th>
<th>A Flower near the water</th>
<th>A Tadpole</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image13" alt="Water Ripples" /></td>
<td><img src="image14" alt="Fish" /></td>
<td><img src="image15" alt="Flower" /></td>
<td><img src="image16" alt="Tadpole" /></td>
</tr>
</tbody>
</table>

*Graphic Courtesy: The Morton Arboretum*