

Teacher Guide for ASK, "Do You See What I See?"

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Scoops (pages 2-3)

Buried Treasure

- What is speculated about this surprising crop?
- Why do you think that someone buried it? And who buried it?

Moon All Wet

- What new surprise does our moon have?
- Explain what scientists think about this new feature.

A Bike that Grows with You

- Describe how a Kilobike could stay with you as you grow.

Newts Ribbed and Dangerous

- Describe how the Spanish ribbed newt protects itself.
- What is its backup protection?

Nestor's Dock (pages 4-5)

- What was the purpose of Nestor's project?
- List 3 things that you learn about a fly in this cartoon.

Extraordinary Eyes (pages 6-11)

Questions/activities to use with this article:

- What are eyespots?
- Describe the eyes of some invertebrates.
- What is thought about the eyes of vertebrates?
- Explain the function of eyes.
- Tell how animals see color differently.
- Explain the difference between the eyes of predators and prey.
- Make two lists. **Advantages of Compound Eyes** and **Disadvantages of Compound Eyes**.
- Describe the eyes of some snakes.
- What are thinking eyes?
- Explain the difference between the eyes and the brain for animals and for humans.
- State the roll of each part of the human sight process.

Fun with Mirrors (pages 12-13)

Ideas to use:

- Describe the Cloud Gate sculpture.
- How do you see the image of yourself in a mirror?
- Why are convex mirrors helpful on cars?
- Answer Plush's "mirror, mirror" question.

Eyes on the Sky (pages 14-21)

During or after reading use these prompts to focus on the content:

- Describe 2 of the early gadgets that helped people to see well.
- What did Hans Lippershey invent?
- Tell the things that Galileo saw with his new telescope.
- How did Johannes Kepler improve upon Galileo's telescope?
- Define **concave** and **convex**.
- In the early years, why did telescopes remain long and thin?
- Explain 1 advantage and 1 disadvantage of Newton's telescope.
- Make a list of the discoveries made by the Herschels.
- Explain the advances made on telescopes in 1857.
- How did new technology improve the view of the skies?
- How do tile patterns improve telescopes?
- Explain how space telescopes have really advanced the viewing of space.
- A telescope needs the following:
 - Brightness
 - Magnification
 - Resolution
 Describe each of these components.

Amazing Light! (page 22)

Questions to consider:

- Describe the types of rays made that light makes.
- What is electromagnetic radiation?
- In another article of this magazine, some creatures are mentioned who are able to see infrared light. Who are they?

Photo Firsts (pages 23-25)

- There are several ideas described below that you might consider using with this article. Or, use a combination of the ideas.
 1. Divide the class into 8 groups. Assign 1 of the 8 time periods shown over three pages. Ask each group to read and discuss their section. Have them prepare a brief report based on their time period information. This report would then be presented to the rest of the class.
 2. As a whole class develop a photo timeline on the chalkboard or on chart paper, using the information from the article.
 3. Ask the students to read silently to themselves. As they read ask them to use a **Quick write** procedure. They are to make brief notes about the information, or possibly a timeline. After completing this task, have the students share their work in pairs or in groups. Follow-up this activity with a whole class discussion.

Where's My Visibility Cloak? (pages 26-27)

Questions to use with a discussion:

- What is the first step that the scientists have taken?
- Describe how the light bends.
- What is necessary to make this work?
- Explain the few problems that the scientists still face.
- Try the penny trick.
- Explain how this trick works.

Jimmy the Bug (page 32)

- What are some expressions that associate the heart with love?
- What is thought to be the source of the heart shape depicting love?
- What similarity exists between a heart shape and your heart?
- How does your heart work?

Marvin and Friends

- Why do you think that Plush is so determined to see Marvin?
- Why does Bot suggest that Marvin keep his distance from Plush?

Don't forget:

- To go to www.askmagkids.com/jokes
- To enter the contest "Whose View" page 31.
- To ask Jimmy the Bug a scientific question.