



How Can I Help an Animal Cross the Road Safely?

Level: Grades 3-5

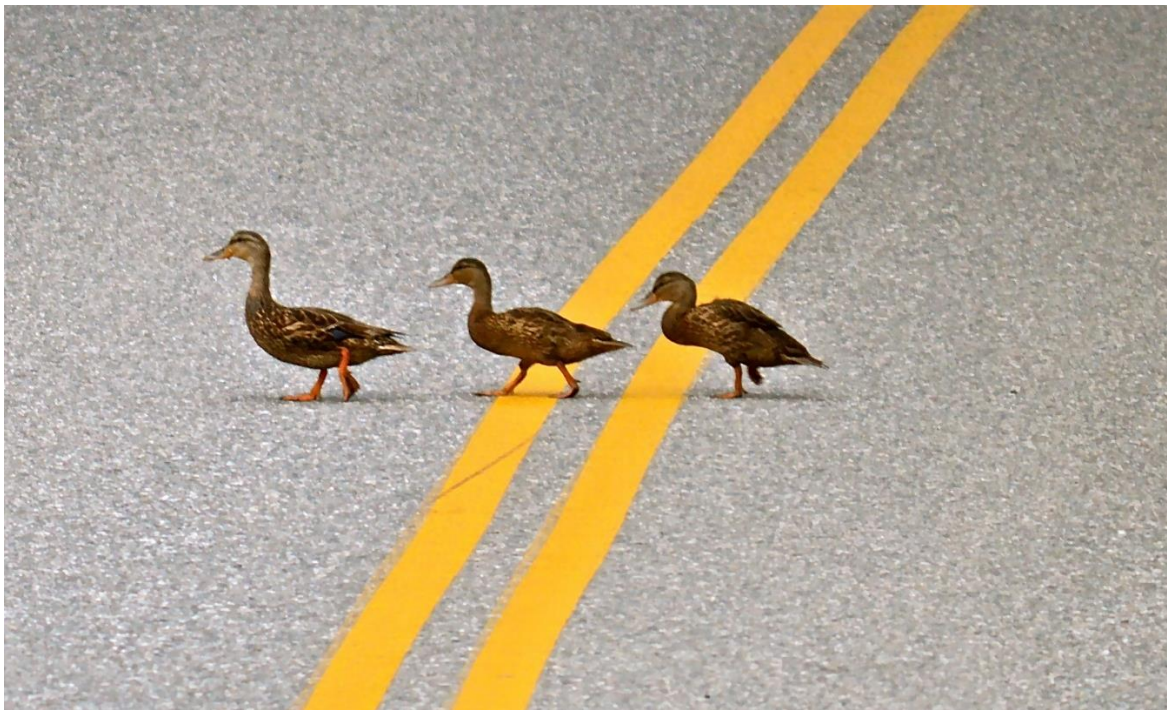


Image: John Stiles/iStock/Getty Images Plus

Your challenge

In this activity you will be an **engineer**! Your challenge is to identify an animal that lives near you. You will design a way to help this animal cross a road safely. As an engineer, you will build a **model** of your design.



Handy Hint

Use the glossary at the end of this activity to look up any words you don't understand. Words in the glossary are in **bold**.



Part 1: Read about animal crossings

You will need:

- Smithsonian Science Stories: *Changing Habitats* (optional)
- *Treetop Bridges Over a Pipeline* comic strip (optional)

Steps:

1. Read the information on Animal Crossings below.



Take It Further

If you want to learn more about wildlife corridors, check out these Smithsonian books:

Treetop Bridges Over a Pipeline

This is a short comic about monkey tree bridges in Peru.

Smithsonian Science Stories: *Changing Habitats*

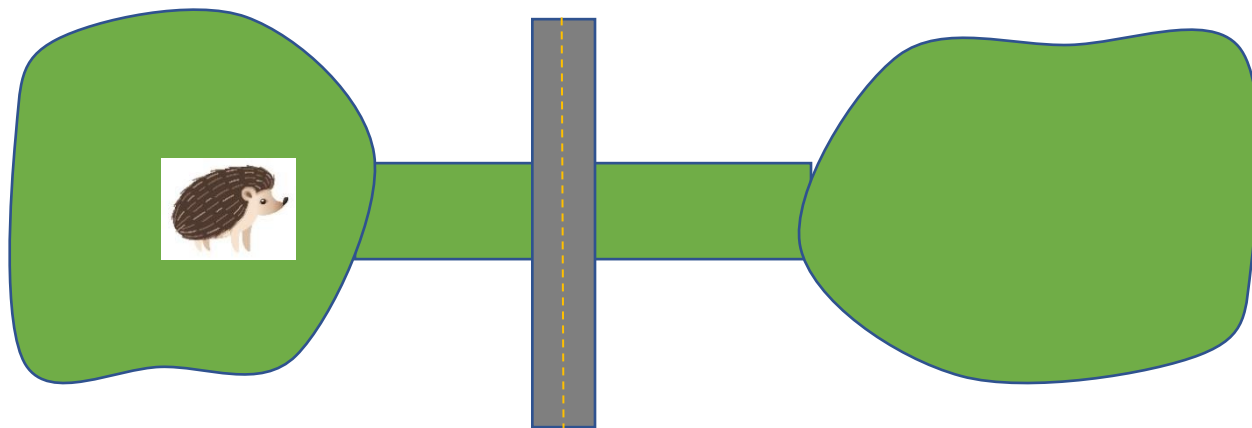
Reading 7 is about wildlife corridors in Banff National Park. Reading 8 is about ways to protect amphibians.

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Animal Crossings

Wildlife corridors

Do you ever have to travel anywhere? Other animals need to travel, too. Sometimes they need to look for food. Sometimes they need to find a mate. Sometimes they need to lay eggs. A **wildlife corridor** is a safe way for an animal to get between two areas. When a road crosses a wildlife corridor, animals need help getting across the road.



Hedgehog Image: [Alfadanz/iStock/Getty Images Plus](#)

Crossing on the road

Crossing on the road can be dangerous, but there are ways to make it safer. The crossing needs to be where animals normally cross. It needs to look like the animal's normal **habitat**. Signs can help traffic slow down.



Image: [LeoPatrizi/E+/Getty Images Plus](#)



Image: [Myriam Munoz/iStcl/Getty Images Plus](#)



Going over the road

An **overpass**, or bridge, is a crossing that keeps the animal above the road. The animal needs to be guided away from the road and onto the overpass. The habitat on the overpass needs to be the same as the animal's normal habitat. The animal has to feel comfortable and safe.



Image: pics-xl/iStock/Getty Images Plus

Going under the road

An **underpass**, or tunnel, can also be safer than crossing on the road. However, animals need to be able to see the other side. The underpass can't be too long. It also needs to have a bottom that feels normal to the animal. The underpass needs a way to stop the animal from going onto the road.



Image: IHervas/iStock/Getty Images Plus



Part 2: Research an animal

You will need:

- Smartphone, tablet, or computer to access the Internet
- Field Guide (optional)

Steps:

1. Find out what animals live where you live. You may want to search for **endangered** animals.



Handy Hint

Try using the following search terms: your state, e.g., “Maryland” and “wildlife”

2. Research what kind of habitat your animal prefers. The Field Guide might help you.

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Part 3: Research the best place for a crossing

You will need:

- Smartphone, tablet, or computer to access the Internet

Steps:

1. Use a map to find two different areas where your animal might live.
2. Identify a road your animal might have to cross to get between these two areas.



Handy Hint

Try using the satellite view on Google Maps.

3. Decide on the best place for a crossing for this road.
4. Identify the best type of crossing for this place.

Part 4: Design your crossing

You will need:

- Paper or notebook
- Drawing materials
- Ruler (optional)



Steps:

1. Draw your design. Label the different parts.



Take It Further

There is a rule for designing an underpass:

$(\text{height} \times \text{width}) / \text{length}$ should be greater than 2

If you decided to design an underpass, measure the height, width, and length. Does it follow this rule?

Part 5: Build your model

You will need:

- A tray or box to build your model in
- Something long and flat for the road
- Something for your road to sit on. You could use sponges or building blocks instead of soil.
- Something for your crossing
- Tape
- Scissors



Remember to ask an adult before you use anything!



Steps:

1. Build a model of your crossing.
2. Follow your design.

Part 6: Share your model

You will need:

- Smartphone, tablet, or computer to access the Internet (optional)

Steps:

1. Share your model with a friend or family member. Ask them if they have questions about the model or suggestions for it.
2. Make changes to your model to improve it.

Congratulations on becoming an engineer!

Glossary

Endangered	An animal that is in danger of disappearing from Earth
Engineer	A person who designs solutions to problems
Habitat	Where an animal lives
Model	Something that can be used to represent the real thing
Overpass	A bridge or road that crosses over another road or railroad
Underpass	A tunnel, opening, or passage under a road
Wildlife corridor	A way to get between two areas that have the same habitat