



## Magnets and Migration Middle School

### Overview

Students will apply their knowledge of magnetic fields to learn about current research on animal navigation. They will first investigate how the magnetic field of a bar magnet exerts a force on a paperclip. They will then conduct investigations to explore how animals may use Earth’s magnetic field to navigate over long distances. Finally, students will evaluate the design of experiments scientists are using to test magnetoreception in butterflies.

### Phenomenon

Animals use Earth’s magnetic field to navigate.

### **Next Generation Science Standards**

MS-PS2-5. Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.

Asombro lessons are aligned with the three-dimensional learning model of the Next Generation Science Standards.

<b>Science &amp; Engineering Practices</b>	<b>Disciplinary Core Ideas</b>	<b>Crosscutting Concepts</b>
Planning and carrying out investigations  Developing and using models  Constructing explanations and designing solutions	PS2.B Types of interactions	Cause and effect  Scale, proportion, and quantity

### Common Core State Standards

8.RST.3 Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

8.RST.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6–8 texts and topics.