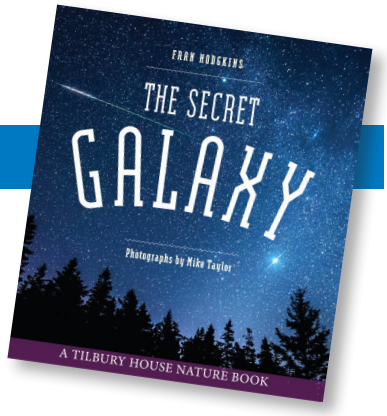
The Secret Galaxy



RIF EXTENSION ACTIVITIES FOR EDUCATORS

STEAM-THEMED: SCIENCE, TECHNOLOGY, ENGINEERING, ART, MATH

SCIENCE, TECHNOLOGY
DUST DETECTIVES

Materials: tape, white paper, magnifying glasses

Stars are born of gas and dust. Explain to students that dust is all around us on Earth and in space. Give each student a 3 inch piece of tape. Have students place the sticky side of the tape on a piece of carpet, clothing, or other surface. Students should gently pull tape back from the surface, then adhere the sticky side to white paper. Have students examine their dust samples with a magnifying glass. Have them list at least 3 characteristics of dust, hypothesize how the dust got into the classroom, and brainstorm how dust could be collected in space. Why might we want to study space dust?

TECHNOLOGY, SCIENCE
OUT OF THIS WORLD

How would you like to live in outer space? The astronauts aboard the International Space Station (ISS) live in space for a year at a time! Visit **www.nasa.gov/mission_pages/station/main/index.html** to find information and videos about the ISS, its crew, and their mission. You can even see tweets the crew send—from space! Consider creating a school or class Twitter account to keep up with the ISS crew and send them questions or messages. Once students have watched a few videos and explored life on the ISS, ask them to write a story about what it would be like to visit a space station.

ENGINEERING, SCIENCE
CONSTELLATION CONSTRUCTION

Materials: toothpicks, mini marshmallows, markers, paper

Have students go to **www.skymaponline.net** and enter their zip code to see constellations visible in your area. Pick one of the constellations and draw it on white paper, marking a dark dot for each star. Students should write the name of the constellation on the paper. Then, have students construct the constellations using the marshmallows as stars and the toothpicks as the connecting lines. For older students, ask them to research the story behind the constellation and its name. Have them retell the story in their own words to a partner or the class.

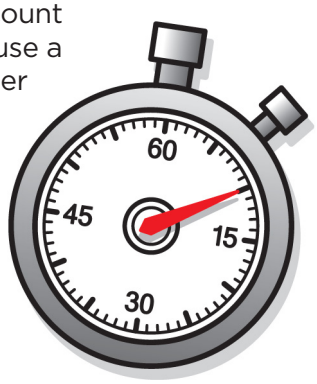
ART, SCIENCE
A STARRY NIGHT

Show students a picture of the Milky Way. Have them to work in groups create their own constellation and the story behind it. Groups should draw their constellation, name it, and write a paragraph explaining its origin. Have each group present its report. Why do you think so many different cultures throughout history have come up with explanations for the stars and other natural phenomena?

MATH
TIME IT!

Materials: stopwatch, paper, pencil

How long would it take to count to a billion? Have students use a stopwatch to time each other counting to 100. From that piece of information, ask students to come up with a method of calculating how long it would take each of them to get to a billion.



RIF
Reading Is Fundamental