



# Project Based Learning

IN THE CLASSROOM

solution  
fluency

Project Ideas  
Year K–5

PBL (Project-Based Learning) is a big part of modern learning environments. It takes students on a cool journey of creativity, exploration, and real-world relevance. But what does PBL look like in the classroom? How do we do it with students? The *PBL in the Classroom* guides that we've developed at the Global Digital Citizen Foundation will help. They contain PBL classroom project ideas for years K–5, 6–9, and 10–12. Each guide contains 8 ideas for awesome projects—that's two for each core subject.

These ideas are useful for all year levels, but what if it's not for your specific grade? No problem—you can fully customize these ideas to suit any year you want. For example, this book features an English Language Arts project called "Sculpting Tall Tales" in which students develop an original sculpture and create a story around it. Here's how you can apply it to a range of different year levels:

- **Primary**—exploring shapes, sculpture, storytelling
- **Middle**—creative writing, character development, visual arts, geometry
- **Secondary**—advanced fiction writing, 3D modelling and animation, presentation skills, media development

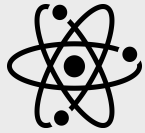
These concepts are also cross-curricular in nature, and can be adapted to other subject areas.

**Solution Fluency** is the process for PBL. It's a way for students to learn problem solving skills and to become successful with any challenge. If you don't know about Solution Fluency or need some resources, visit [globaldigitalcitizen.org](http://globaldigitalcitizen.org) for more information.

So, if you're ready to explore some PBL projects, then let's get to the ideas. Happy learning with PBL!







SCIENCE / TECHNOLOGY

# Downhill Racers

*Explore incline and mass in relation to speed—and enjoy some friendly competition—as you build a downhill race track for different objects!*

## The Scenario

What gives a competitive racer the edge, other than having a good pit crew? It all comes down to designing for aerodynamics and also top energy efficiency. How do you design for speed?

The race is on to explore incline, mass, and motion in this project. Build your own racetrack and send objects of different sizes and shapes zooming to the finish line. Chart and record the best times, and compare the data to learn about how mass and shape affect motion. Award special prizes for the best times, and even build your own cool racing machines!

## Resource Links

[Physics4Kids: Forces in Motion](#)

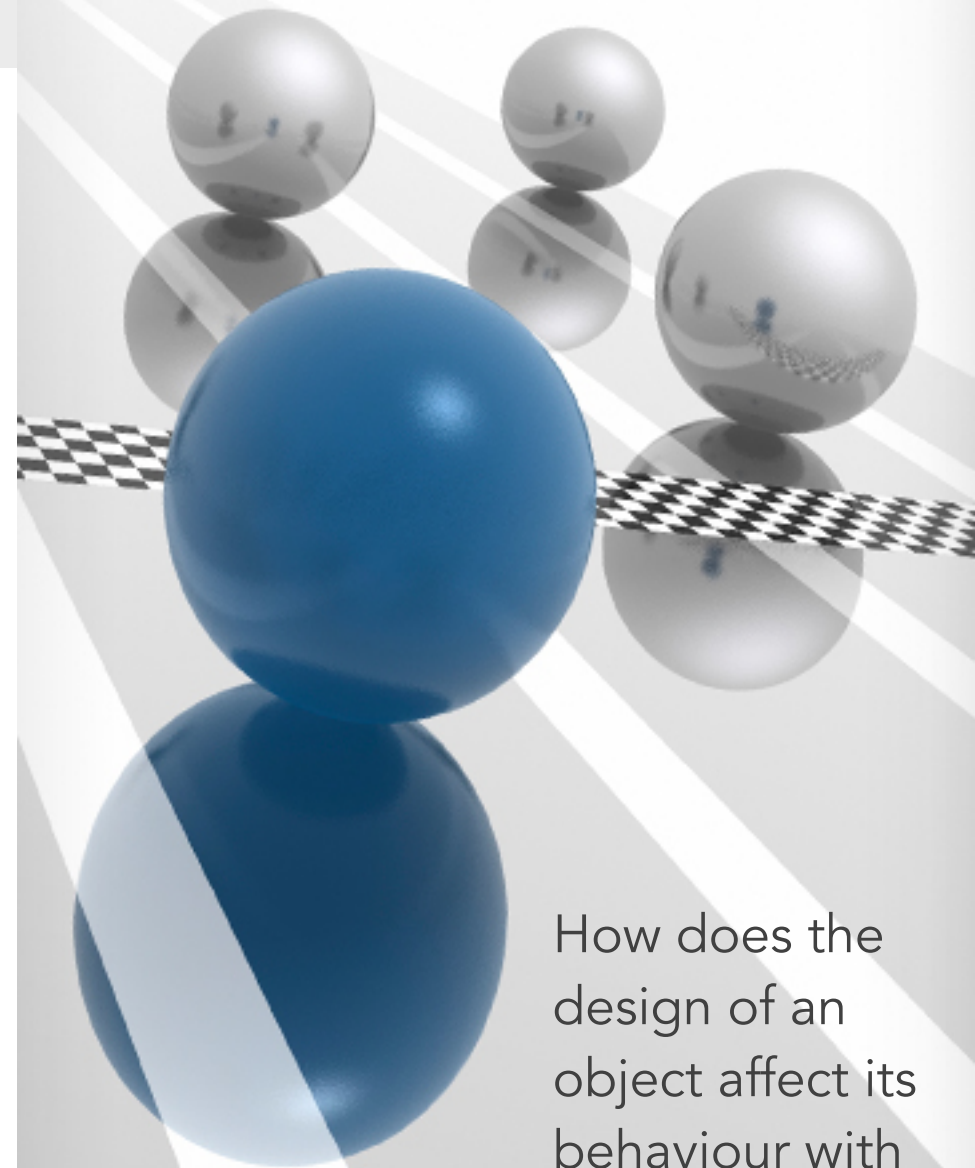
[Science for Kids: Momentum](#)

[Build Your Own Racetrack](#)

[Modern Parents Messy Kids: Ways to Make Racetracks](#)

[Hot Wheels: Design a Race Car](#)

[SelfGrowth: Aerodynamics Experiments for Kids](#)



How does the design of an object affect its behaviour with the laws of motion?

# $\pi$ MATHEMATICS Animal Calendar

*Create your very own calendar and some great games to play! Use pictures of your favourite types of animals or cartoons to make it look great.*

## The Scenario

Calendars are useful tools that help us organize our days, months, and years with ease. What if each page of your calendar told a special story about something that was important to you?

Learn about days, weeks, months, and more as you build your own special calendar. Use the pages to display images of your favourite animals and cartoons. Look at other calendars for inspiration, and then create your calendar masterpiece. Then the learning continues when you play games that use your calendar as the playing board!

## Resource Links

[Family Crafts: How to Make Calendars](#)

[Have Fun Teaching: Calendar Worksheets](#)

[Children's Songs that Teach The Calendar, Weather, Time and Seasons](#)

[Mr. Nussbaum: Calendar Clowns](#)

[SoftSchools: Calendar Activity Games](#)

[Magic Calendar Game](#)



Why do we organize our lives  
using time measurements?



# Taking the Lead

*Turn your class into an organization for good, and create a fundraising campaign for needy charities. Ask other schools to join your cause!*

## The Scenario

What does it take to be a leader for a good cause? How can you use this knowledge to assist citizens in your community, or maybe even somewhere else in the world? You can be a true leader!

Learn about order, organization, and kindness by turning your class into a leading group on a campaign to raise money for a charity. Vote for your class leaders, and learn about organizing people and resources. Investigate what makes a great fundraising campaign, and create your own for a charity of your choice. Challenge other schools to join you in your quest to do some good!

## Resource Links

[Youth Fundraising Tips](#)

[Punchbowl—Fundraising Ideas](#)

[Fundraising123: Campaign in a Box](#)

[Mindtools: What is Leadership?](#)

[Kid President—Pep Talk About Teamwork and Leadership](#)

[Organizing a School-Wide Fundraiser](#)



How does giving to those in need build character and promote unity in organizations and in communities?





ENGLISH LANGUAGE ARTS

# Beyond the Storybook

*Test your reading comprehension along with your artistic abilities. Pick a favourite story or scene from a play and summarize it using cool imagery!*

## The Scenario

Visual stories are engaging and fun to read. Comics, storyboards, and graphic novels are examples of how pictures are used to tell a story. Now it's time for you to make pages from a story come alive!

Pick one of your favourite stories, play scenes, or scene from a book and summarize it using art and imagery. Use text references to draw the characters and put them into action. Show your comprehension and creativity together and tell your story with visual flair. Put all the projects together in a class storybook, too!

## Resource Links

[Art of Storytelling: Picture a Story](#)

[MBG—33 Great Apps for Storytelling and Creativity](#)

[10 Tips for Creating Storyboards from DreamWorks](#)

[Reading Rockets: Reading for Meaning](#)

[Mr. Nussbaum: Reading Comprehension](#)

[Magic Keys: Children's Storybooks Online](#)

[Baby Bird Productions: Draw and Tell Stories](#)

Why is the art of storytelling with pictures important in so many aspects of our everyday lives?







SCIENCE / TECHNOLOGY

# Amazing Artifacts

*Take on the role of a palaeontologist and display fossils in a museum tour! Study and recreate your own exhibits from actual documented dig sites!*

## The Scenario

The past is full of the footprints of great creatures who ruled the world before us. Using art materials or technology and fun fact-finding, you can bring the past alive in your own museum tour!

Look into fossils and their discoveries, made by scientists all around the world. Recreate these fossils from actual pictures, using sculpting materials such as pleistocene, plaster of paris, or papier-mâché. You can even render them using a computer, and then develop fact sheets on their specific histories. Then it's time to set up your museum tour, and show off your amazing artifacts brought back to life!

## Resource Links

[Science Kids: Fossil Facts](#)

[KidsDinos.com](#)

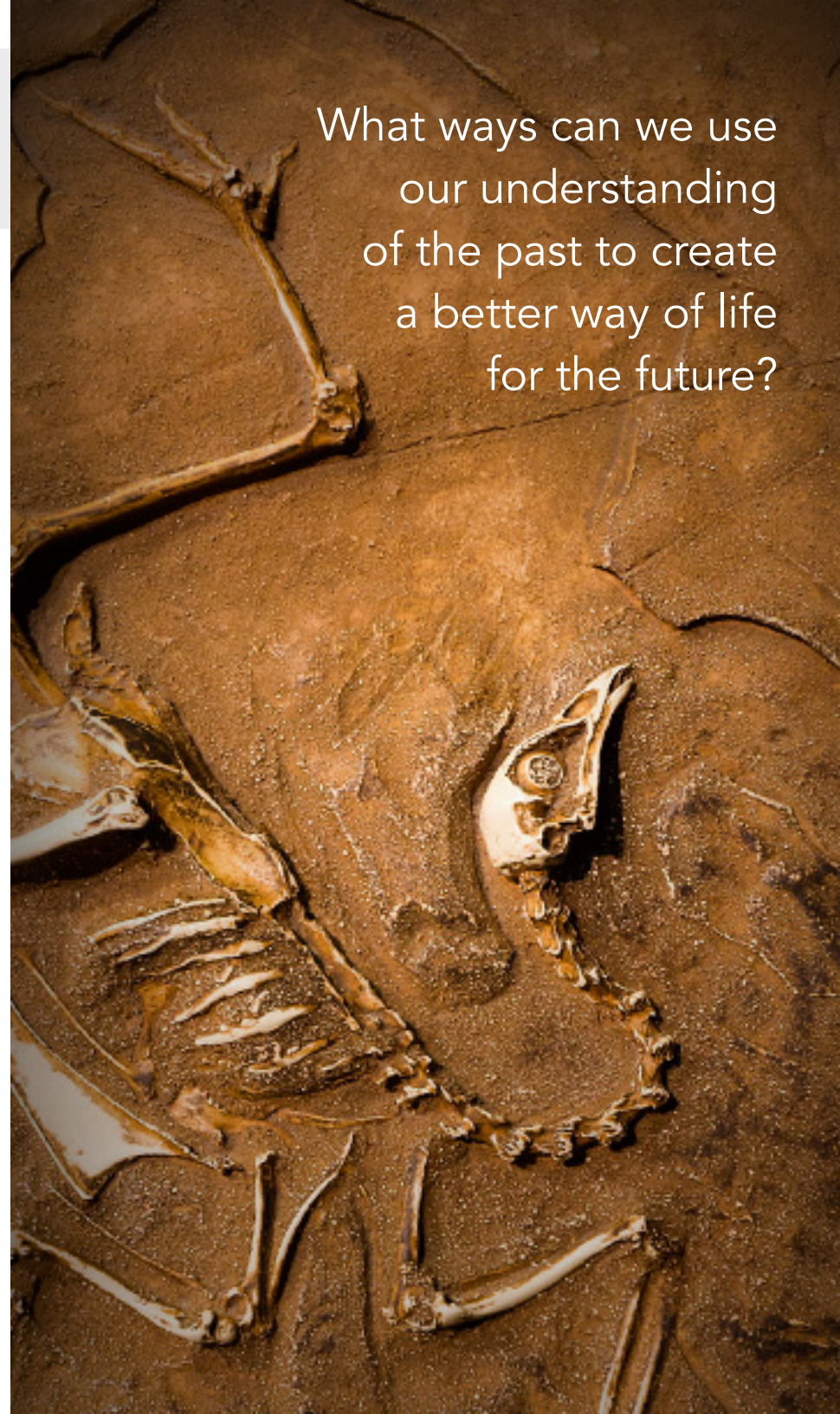
[Sheppard Software: Dino Might](#)

[Fossils for Kids](#)

[The Artful Parent: Sculpting](#)

[Make Your Own Fossils](#)

What ways can we use our understanding of the past to create a better way of life for the future?



# $\pi$ MATHEMATICS Pet Project

*Build an animal playground for your pet using the skills of measurement and modelling. Create a safe and fun place for your furry friend to hang out!*

## The Scenario

Pets love to play, and they love to be played with. They also love to go on all kinds of adventures on their own. Imagine what your ultimate pet playground would look like. How would you represent it—using a diagram or a model—to the company that was building it?

Design and build a scale model of the ultimate jungle gym for your pet! Use precise measurements and record them on the overall plan, and then start building your model. How big will it be? What features will it have? Get creative for your favourite little critter!

## Resource Links

[Revell Hoepage](#)

[How to Build a Dog Jungle Gym](#)

[PetSmart: Furniture and Scratchers](#)

[Animal Planet](#)

[This Old House: How to Build a Pet Agility Course](#)

[How to Make a Blueprint \(for Kids\)](#)

[Hill's Pets: Exercise and Nutrition Tips](#)



How can caring for our pet's health and well being be beneficial for our own?





SOCIAL STUDIES

# Cultural Food Fair

*Bring your love of food and culture together and explore ethnicity through cooking and sharing as you put on a food fair that celebrates the world!*

## The Scenario

Food brings families and friends together. It's fun to make and even more fun to eat. What if you could explore all the different cultures of the world through the foods they eat? Let's get cooking!

Create a cultural buffet of ethnic foods and enjoy a day of eating and learning! Research various cultures and the traditional foods they eat, get the ingredients, and have fun making the dishes for the class to enjoy. Set up tables or booths in your class or a larger room and invite students, teachers, and parents to come and taste the world!

## Resource Links

[A to Z World Culture](#)

[AllRecipes—World Cuisine](#)

[Recipe Lion—Ethnic Foods](#)

[StartCooking—7 Ways to Present Food Like a Chef](#)

[World Food Fair 2015](#)

[Cooking With Kids Homepage](#)

[KidsHealth: Being Safe in the Kitchen](#)

How does learning about other cultures and their way of life create a better world for everyone?





# Sculpting Tall Tales

*Use sculpture, geometry, and storytelling in this fun project. Build a sculpture of anything you want, and create an exciting story about it!*

## The Scenario

If a picture can be worth a thousand words, how about an object? Better yet, how about an object you make yourself? Every artist's work has a story, and you can make yours a story unlike any other!

Use blocks and paper shapes of all sizes to build a sculpture from your imagination. Is it a person, a building, an animal, or some kind of vehicle? You decide what your masterpiece is going to look like, and what kind of a story you can tell about. Then write that story and tell it in class as a tribute to your great creation!

## Resource Links

[Hans Christian Andersen Storytelling Center](#)

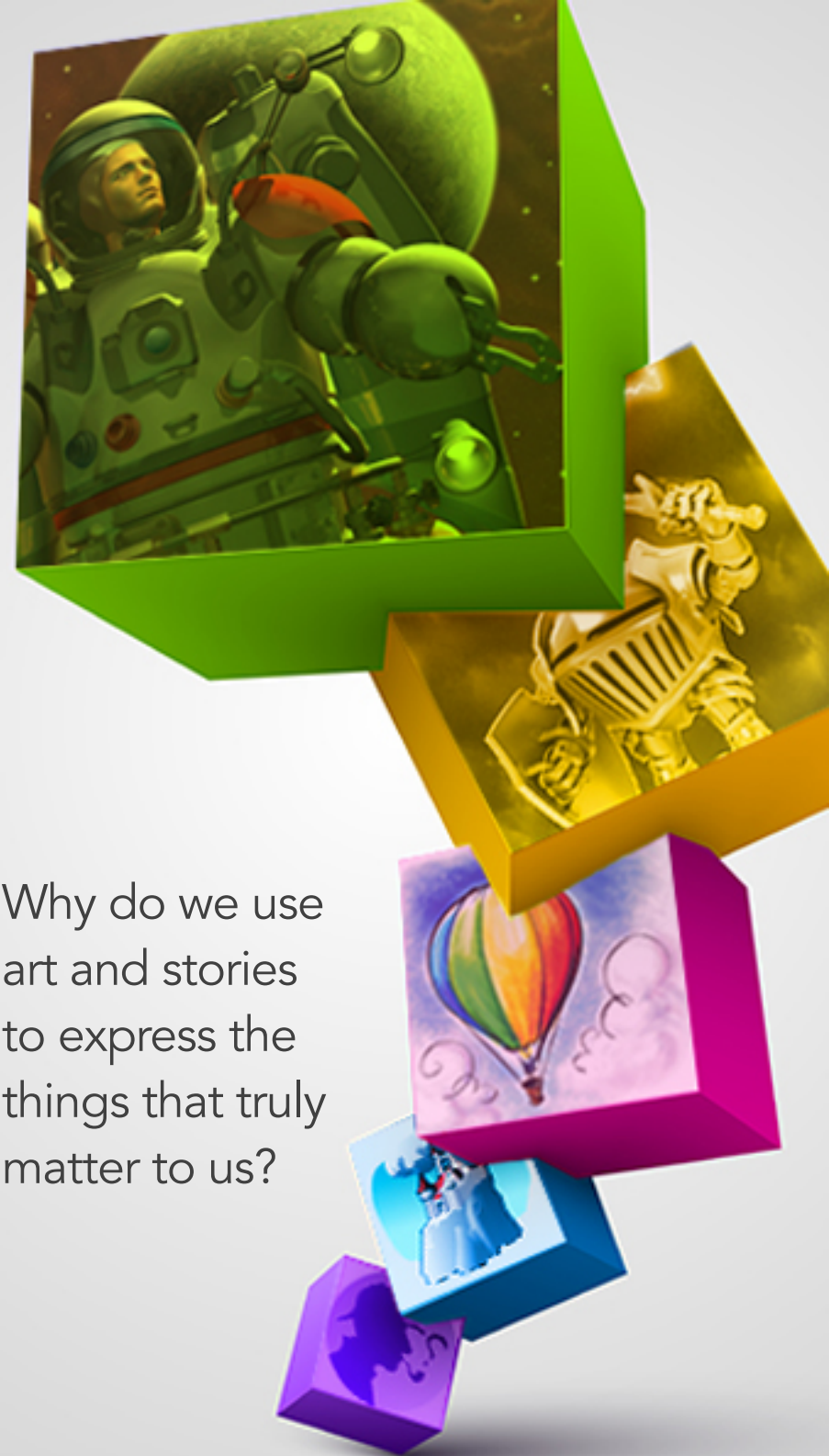
[Kinderart: Sculpture and Collage](#)

[Construction and Sculpture Crafts](#)

[Kathy Schrock: Digital Storytelling](#)

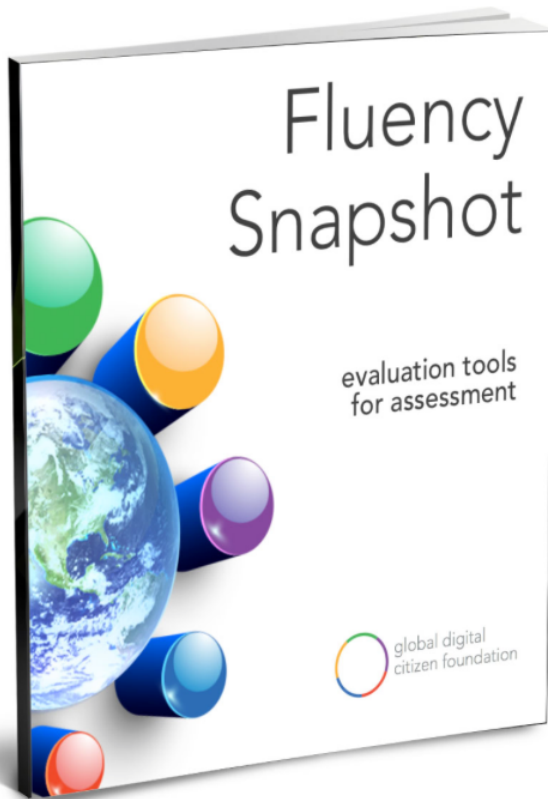
[Scholastic: Story Starters](#)

[StuartStories Homepage](#)



Why do we use art and stories to express the things that truly matter to us?





## Download a FREE COPY of the Fluency Snapshot

With PBL, your students need to know how developed their skills are, and we want to help you. The Fluency Snapshot is a perfect companion for PBL assessment, and it's *yours for free!*

Use these 21st Century Fluencies assessment tools for:

- Developing a baseline
- Student self-evaluation
- Measuring performance
- Cultivating understanding

*Get Your Copy **HERE!***

The [Global Digital Citizen Foundation](#) is a non-profit organization dedicated to cultivating responsible and ethical global citizens for a digital world. The GDCF helps teachers to instill these values in their students and guide them towards creating a better world for themselves and for others. Our focus is on [the 21st Century Fluencies](#), which are outlined extensively in the book *Literacy is Not Enough* (Crockett, Lee et. al.; 2011). We have also developed extensive resources and [exceptional professional learning programs](#). For more information, please visit our [website](#).



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