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Project
Based
Learning

IN THE CLASSROOM

solution fluency

Project Ideas
Year 6–9

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 a Mathematics project called "Selling a Cereal Box" in which students design a cereal box for marketing. Here's how you can apply it to a range of different year levels:

- **Primary**—exploring shapes, art and drawing
- **Middle**—volume of right rectangular prisms, basic graphic design principles
- **Secondary**—media and marketing studies, package design, advanced modelling techniques

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 for more information.

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

Explore the Universe

Visualize and develop a design for your very own spacecraft for exploration and collection of data on the surface of a planet in our solar system!

The Scenario

Since time began, humans have looked to the stars. Now it's your turn! What kind of a planetary explorer will you be and what will you discover? What can you build to assist you in your mission?

Pick a planet to explore and then create a design for a special research craft. Your craft will traverse the planet's surface and collect data for research back on Earth. This knowledge will help scientists learn how we can adapt to the planet's atmosphere and terrain for further exploration, and perhaps even colonization.

Resource Links

NASA Official Website

Nine Planets Interactive Solar System

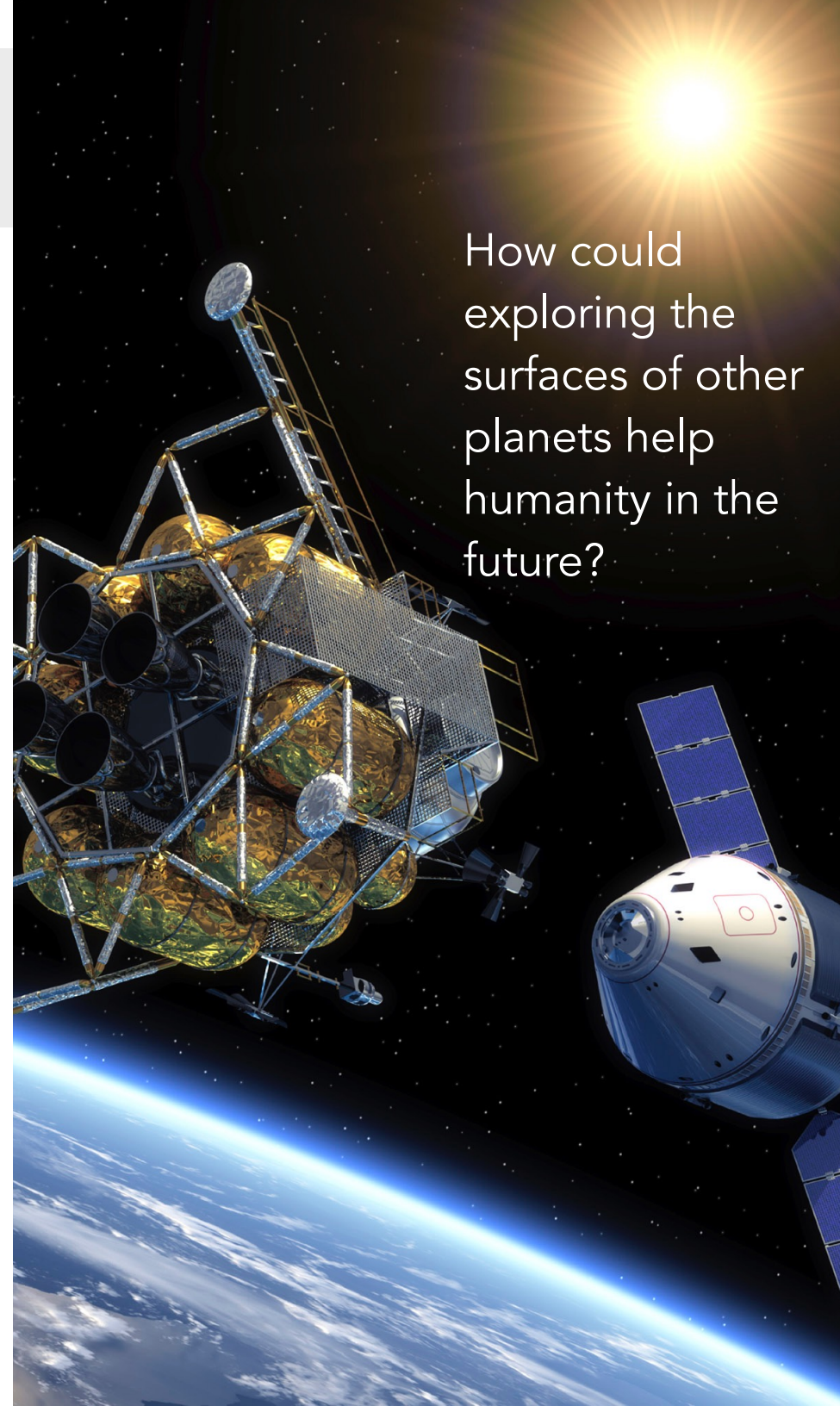eGFI: Build a Lunar Lander

ESA Kids

Air and Space: Exploring the Planets

Lunar Lander Game—Science Channel

Mars Mimicking Chamber—AIP

How could exploring the surfaces of other planets help humanity in the future?

π MATHEMATICS
Selling a Cereal Box

Exercise your creative and mathematical muscles in this project, and design unique packaging for a special breakfast cereal!

The Scenario

What is it about a product that makes people want to buy it instantly? How is a product marketed and made to look irresistible? Now you get to try your hand at designing to make the sale! You'll be using a combination of math and art skills to create a cereal box package.

You'll learn about things like volume and measurement, models and marketing, and more with this super-fun project. Take it even one step further and create your own dynamic sales ad or commercial to bring it to the masses!

Resource Links

PBS Kids: Design a Cereal Box

Image Chef

Teaching Kids Business

The Five Things Product Packaging Must Do

Graphic Design Principles—J6 Design

25 Cool Cereal Box Designs

Your Design Here!

What goes into the successful design and marketing of an original product?

Previewing History

Go back in time and make a movie trailer about an exciting period in history. You've got a few minutes of film to tell a story and get the buzz going!

The Scenario

Many movies are a fictional retelling of a historical event, such as *Titanic* or *The King's Speech*. The makers of these films knew about cause and effect, and had an understanding of chronological events in history. These films were very entertaining, and now it's time for you to make history into a movie idea!

Step into the director/producer role and create a trailer for your own historical film. How about World War I, the great Chicago fire, or the life of Emperor Marcus Aurelius? There's no limit, so look at your favourite film trailers to inspire you in making history exciting!
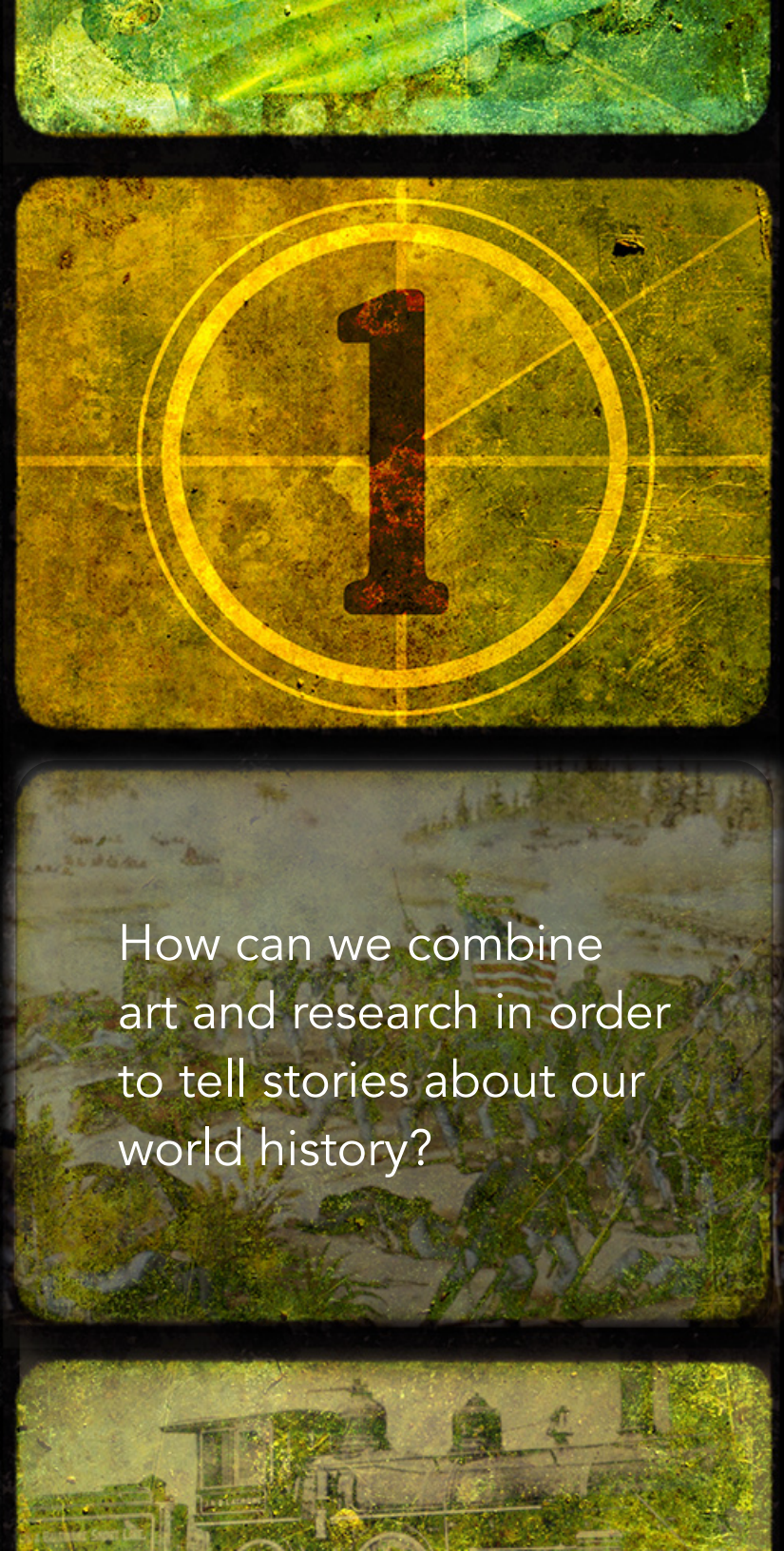
Resource Links

DIY—Make a Movie Trailer

Fast Company: Trailers

10 Historical Events That Deserve Movies

Filmmaker IQ

History on Film

How To Write a Trailer Script

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How can we combine art and research in order to tell stories about our world history?

Logomotion

Design a logo, add a company motto, and write a script for a great commercial advertising a hot new cellular service provider!

The Scenario

Why do logos stick in your mind? Why are they so memorable? Logos are designed to give a company an identity that consumers recognize anywhere. Can you design the ultimate logo? Of course you can!

A hot new cellular service provider wants you to design the logo and corporate motto for their company. They even want you to write and storyboard their first commercial! Create a clever logo that will be globally recognized, unique, and very eye-catching. Then you can develop a tagline and a stunning commercial!

Resource Links

Logo Design: 60 Pro Tips

Write a Killer Slogan

Writing an Effective Slogan—INC

LogoLounge

40 Brand Logos With Hidden Messages

TV Commercial Guide: Writing Scripts

TV Commercials—10 Essentials

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Why are the logos we see every day so memorable, and effective for the companies they represent?

Comic Relief

Show your support for the Earth and entertain at the same time by creating a comic or animated video for environmental awareness!

The Scenario

Earth is a place we all share, and many believe it is in great danger from things like pollution and global warming. There are ways to bring awareness to these and other issues that everybody can relate to. What about a comic strip or a cartoon, for example?

Get ready to dive into animation as you develop a comic or animated cartoon for environmental awareness. Bring your ideas alive with rich images and a unique story about what is endangering our Earth's environment, and how. Show your audience what we can do to make things better for ourselves, and for the planet!

Resource Links

Comic Strip Tips

Comic Strip Templates

GoAnimate for Schools

DreamWorks

Green Living: Top 30 Environmental Concerns

Top 100 Environmental Websites

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What is the best way to get people thinking creatively about finding solutions to the environmental issues we face?

Black Tie Affair

Plan the ultimate formal party! Apply the aspects of measurement and proportion to make recipes, and work with a budget for decorating.

The Scenario

Planning makes perfect. When it comes to hosting an event of any kind for a group, there are many considerations and preparations to be made. And *nobody* throws a party quite like you do!

Time to plan the ultimate bash using math skills, imagination, and a love for good food! Plan a formal party from the ground up by choosing a space, generating functional recipe ideas, and decorating this swanky soiree within a specified budget.

Resource Links

Chef's Blade Recipe Calculations

Budgets

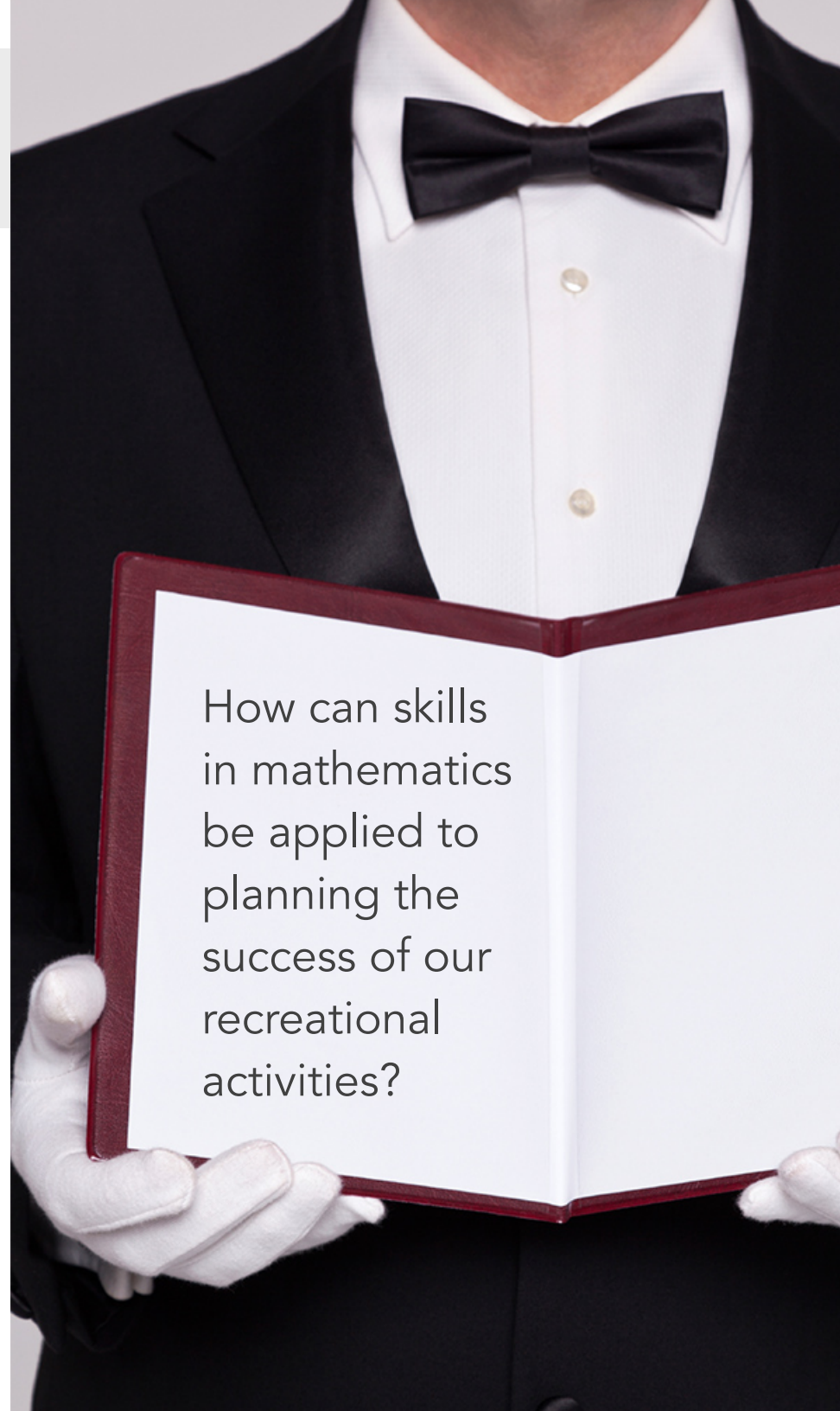Budget Estimator

Planning Worksheets

Building an Event Budget

U of C Irvine—Planning Resources

The Nest—How to Budget for Catering a Party

How can skills in mathematics be applied to planning the success of our recreational activities?

Tour Guide

Learn about community and the interesting areas of your home town or city when you research and create a tour guide for visiting travellers!

What are the best ways to ensure that tourism remains part of a happy, healthy community?

The Scenario

In everyone's home town or city, there's always lots to see and do. It's even more exciting for visitors from other places who may not know where the best places are. That's where you come in!

Design a user guide of all the attractions in your community, and illustrate it as an actual guide or as a webpage. Get to know owners of restaurants and shops to profile in your guide. Display attractions and landmarks of interest. Research tourist guides for inspiration, and create something to show visitors your home is special!

Resource Links

Community Mapping

Discovery Education: Exploring Communities

Photography Tips

Lonely Planet

Know Your Rights—Photographers

Creating a Narrated Tour in Google Earth

Maps Mania

Mysteries of the Past

Become a special journalist investigator and use research and the creative power of both digital and non-digital media to explore an ancient mystery!

The Scenario

Folk tales of restless spirits in old castles; great historical artifacts discovered in the strangest places; entire cities lost without a trace. Our past is filled with legends of the unknown and the unexplainable. Now, bring these fascinating stories to life in your own way!

Dive into a mystery that intrigues you and collect images, eyewitness accounts, and other media. Structure interviews with some fictitious characters played by your fellow students. Exercise your imaginations and create a 3 to 5 minute documentary-style project of your report on an ancient mystery!
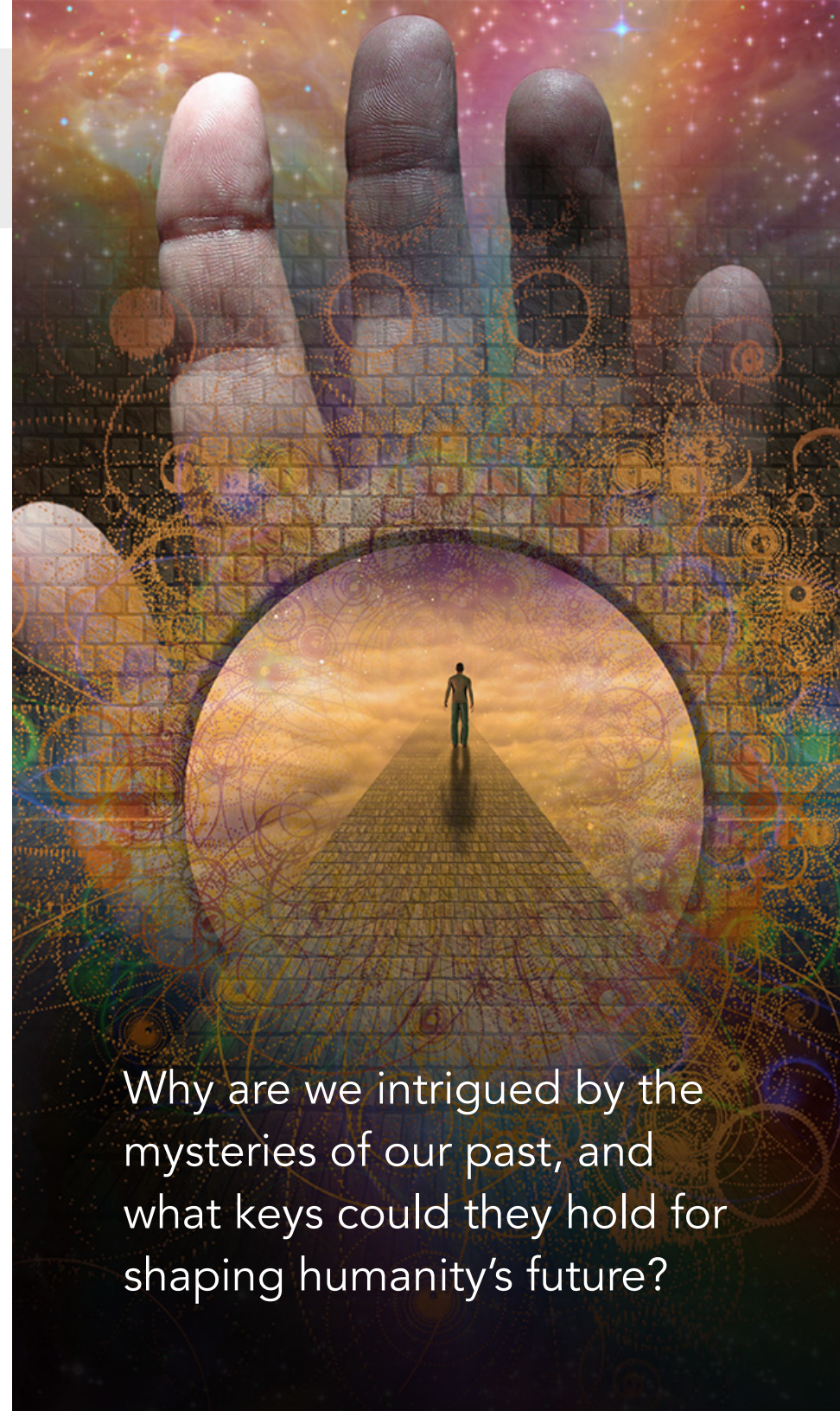
Resource Links

Ancient Origins
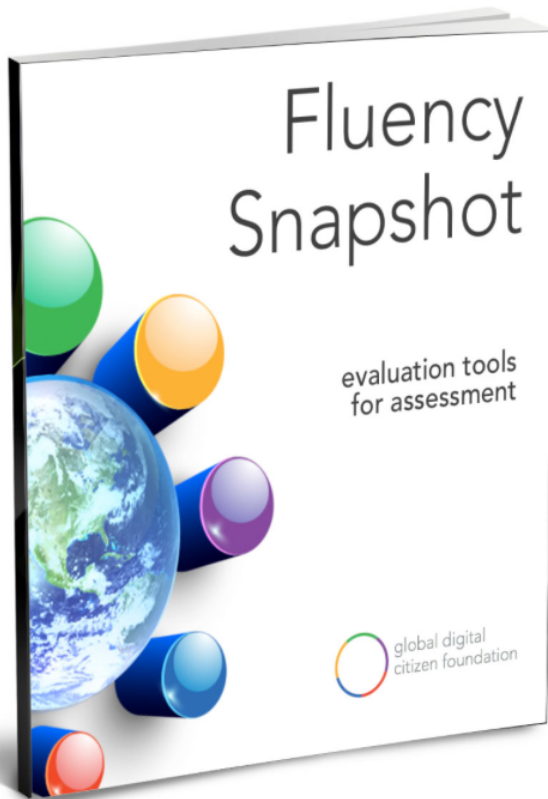
Top 10 Unsolved Mysteries of the Past

Mystery Pile

Desktop Documentaries

Budget Filmmaking

YouTube: Persuasive and Creative Writing Tips

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Why are we intrigued by the mysteries of our past, and what keys could they hold for shaping humanity's future?

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 instil 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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