

# MODEL GUIDE

pick  learn

## Quick How To

for use of the Pick-N-Learn Model

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# MODEL SUMMARY



**The Pick-N-Learn Model uses Stories to provide:**

- A. Engagement through narratives and media
- B. Method for integrating lessons and curriculum
- C. Method for interdisciplinary STEAM

**Stories are a tool for engagement and pathway to Active Learning**



**Active Learning:** learning outcomes depend upon students solving problems, formulating and answering questions of their own, discussing, explaining, debating and brainstorming during your program.

The stories and the model are intended to be **FUN**. The fun also depends on the level of active learning. Our model isn't rigid. You can follow our stories and lessons but as a starting point to exploring and creating. Questions, deviations from the story, creating your own narrative, these are desired outcomes.

Resources – stories, characters, videos, lessons, are available to you. Explore them.

Tips and strategies for promoting Active Learning are included later in this guide.



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# STORY TELLING



The PNL model provides Stories in student and teacher versions. The teacher version:

- A. uses symbols to hint at places within the story where some activity can be conducted (hands-on, looking at or creating an image, reading or writing a supplemental story, video, etc.)
- B. allows reference points and ties to curriculum
- C. are intentionally open-ended
- D. can be read by teacher, students or use audio clips

## Stories have markers for Level 1 use

Art Activity	
Connector Story	
Connector Media	
Hands-On Activity	
Easter Egg	

he chooses to wear the same shirt when she gives him so many others ( $\triangle 1$  2). But back at the palace, he spends his time restricted to the kitchen. He works with kids that only have one shirt. To him, if they couldn't have more then he wouldn't either.

## Markers refer to a list of activities at the end of the story:

"My hair is a masterpiece," said Sufi ( 3 3 4). "Try finding something else like it. You can't." Sufi's hair wasn't all that strange but it did have a lot of white

characteristics on natural objects like trees, flowers and human body.

- 9. Can compare the pattern and COUNT Octagon with the NASA Origami and Solar Panels in Space, <https://www.nasa.gov/jpl/news/origami-style-solar-power-20140814>
- 10. Discussion point: Does she put a spinner down? What are the numbers referring to?

### **Connection Art:**

- 1. Based off the Character Sheet description of Euclid, have participants write a short essay on what Euclid's life must be like OR about the first time that Sufi and Euclid met. See Activity: Euclid's Life if guidance is desired
- 2. Have the participants sketch what the stairwell and tunnel entrance may look like or write a description of how each of the three characters (Isa, Sufi, and Euclid) feel as they enter the new tunnel. See Activity: The Tunnel if guidance is desired
- 3. Have the participants write their own poems, jingles and spells that might work in opening the door.
- 4. Have the participants either sketch or write what is on the other side of the door. See Activity: The Other Side of the Door if guidance is desired

### **Easter Eggs in the Story:**

- 1. Euclid is a reference to the Greek scientist and mathematician Euclid (300 BC). He is the author of "The Elements", a collection of 13 books about geometrical theorems. He's known as "the father of geometry"

# LEVELS OF EXPLORATION



A guide per level

## Level 1 use

- A. Teacher reads the Story in advance, noting Connection Markers
- B. Choose a character to start the Program, use the character sheet to introduce the character to the class
- C. Read the Story to the class (or use Audio clips, students' reading the story, etc.), Stop at the 1<sup>st</sup> Connection Marker
- D. Do the connector activity (hands-on, image, lesson, etc.)
- E. Return to the Story. Read the Story until the next Connection Marker, and so on.

## Level 2 – a guide

Level 2 lets students and teachers take a more active and creative role. The list below is an example where students and teachers decide to do more other things

- A. Teacher reads the Story in advance, noting Connection Markers
- B. Choose a character to start the Program, use the character sheet to introduce the character to the class
- C. Have the students write a one page story of the character's life/ parents/ home town/ wildest dream/ whatever you choose
- D. Read the Story to the class (or use Audio clips, students' read the story), Stop at the 1<sup>st</sup> Connection Marker
- D. Do the connector activity (hands-on, image, lesson, etc.)
- E. Note student interest is strong on ABC (e.g. a tunnel in the story) and they are weak in YYY (e.g. ratios), so teacher makes up an activity where participants draw tunnels whose walls are a ratio of heights to widths, leading to a chamber which has its own ratios
- F. Return to the Story. Read the Story until the next Connection Marker, and so on.

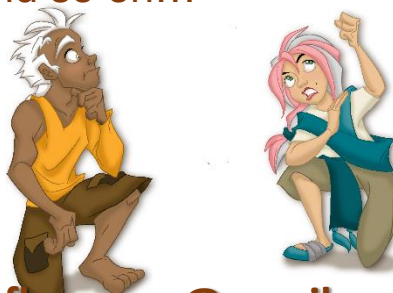
# LEVELS OF EXPLORATION

A guide per level

## Level 3 – a guide

Level 3 is an even greater level of exploration where students and teachers begin creating their own side stories or use a story and connect their own curriculum and lessons. E.g.,

- A. Read the Story The Gami Chamber, noting Connection Markers and Themes within the Story
- B. Review NASA missions and pick a few that may have themes or parallels to that of the Story
- C. Choose a character to start the Program, use the character sheet to introduce the character to the class
- D. Present the NASA Mission/s
- E. Read the Story to the class (or use Audio clips, or students' read the story), Stop at the 1<sup>st</sup> Connection Marker
- F. Ask participants to read the Story. Ask them to find ways the Story might connect to the NASA Mission
- G. Do a connector activity (hands-on, image, lesson, etc.). If it a lesson or hands-on activity then ask the students how the activity could connect to the NASA mission instead.
- H. Return to the Story. Read the Story until the next Connection Marker.
- I. Create a connector with participants that relates to an aspect of the story or a character at the time in the story, including mathematical or scientific requirements in the connector
- J. Return to the Story, and so on...



# TIPS TO ACTIVE LEARNING



**Questioning Purposefully** - generally helpful to ask questions in a logical and sequential order and at various levels (e.g., application, evaluation, consequence)

**Examples and tips:** classroom demonstrations, Think-Pair-Share, short in-class writing assignments, subject matter warm-ups, connecting course content to current events, transforming scenes into puzzles, high-interest low-stakes in-class contests, muddiest point/clearest point, debates - classroom debate assignments to help students (a) learn to locate information, (b) think critically, (c) formulate persuasive arguments and counter-arguments, and (d) express themselves in oral and written forms, in-class role-plays, field trips (real, simulated or virtual),

**AFTER TWO WEEKS WE  
TEND  
TO REMEMBER ...**

10% of what we read

READING

20% of what we hear

HEARING WORDS

30% of what we see

LOOKING AT PICTURES

**PASSIVE**

50% of what we see and  
hear

WATCHING A MOVIE/VIDEOTAPE

LOOKING AT AN EXHIBIT

WATCHING A DEMONSTRATION

SEEING IT DONE ON LOCATION

70% of what we  
say

PARTICIPATING IN A DISCUSSION

GIVING A TALK

90% of  
what we  
say and  
do

DOING A DRAMATIC PRESENTATION

SIMULATING THE REAL EXPERIENCE

DOING THE REAL THING

**ACTIVE**

Adapted from: Edgar Dale *Audio-Visual Methods in Teaching*, Holt, Rinehart and Winston.

# RESOURCES



The Pick-N-Learn team provides resources for each connector story.

An online portal is available that provides you:

**Stories:** main narrative The Story of Disce in book and graphic novel

Stories: connector stories to tie curriculum

- Teachers Guide: has the story with level 1 connector markers
- Story: clean version (no markers) of the story and without any teaching accessories – the student version

Directories provide resources connected to the stories or as a reference for level 2 and 3 exploration. Resources include:

- Activities: hands-on, writing, and acting activities to engage learners
- Audio: clips of the story, audio of content related to the story or its learning objectives, etc.
- Character Sheets: introduction material to a character presented in the story. Contains a brief summary of their life and appearance. Starter material.
- Connection Points: connections to other stories, whether in written or graphical form.
- Level 3: hints, guides or materials that could be of use in using the model at higher levels, e.g. NASA missions
- References: other materials that may be of use in connecting to and exploring the model
- Video: clips of science content, news, or other visual content related to the story or its learning objectives

A Pick-N-Learn story in book and graphic novel form. Get your copies by request at [teamoflearners@gmail.com](mailto:teamoflearners@gmail.com)

# Escape from Disce

