



# Marie Curie/Lord Baden-Powell Challenge 2020-2021 for Kindergarten-2<sup>nd</sup> grade

7 November 1867 – 4 July 1934	22 February 1857 – 8 January 1941
 <p><b>Marie Skłodowska Curie</b> born <b>Maria Salomea Skłodowska</b> was a <a href="#">Polish and naturalized-French physicist and chemist</a> who conducted pioneering research on <a href="#">radioactivity</a>. She was the <a href="#">first woman</a> to win a <a href="#">Nobel Prize</a>, the first person and only woman to <a href="#">win twice</a>, and the only person to win a Nobel Prize in two different sciences. She was part of the <a href="#">Curie family legacy</a> of five Nobel Prizes. She was also the first woman to become a professor at the <a href="#">University of Paris</a>, and in 1995 became the first woman to be entombed on her own merits in the <a href="#">Panthéon</a> in Paris.</p>	 <p><b>Lieutenant General Robert Stephenson Smyth Baden-Powell, 1st Baron Baden-Powell</b>, was a <a href="#">British Army officer, writer, founder, and first Chief Scout</a> of the world-wide <a href="#">Scout Movement</a>. He was also founder, with his sister <a href="#">Agnes</a>, of the world-wide <a href="#">Girl Guide/Girl Scout Movement</a>. Baden-Powell authored the first editions of the seminal work, <i>Scouting for Boys</i>, which was an inspiration for the Scout Movement.</p>

## What:

- Kay Carl Elementary School students are encouraged to earn **500 or more Marie Curie/Lord Baden Powell Challenge** points by **May 1, 2021**.
- Students will explore science, technology, engineering, art, and math (STEAM) connections to the past, present, and future.
- Points are earned as students complete a variety of self-paced, student-directed challenges including memorization, investigation, problem-solving, interviews, field trips, reading, writing, web adventures, research, and presentation.

## Why:

- To encourage students to use their sense of wonder and curiosity about the world around them through student-directed (STEAM) educational activities.
- To go above and beyond classroom expectations and establish a habit of striving for excellence.
- To think like a scientist, engineer, and mathematician.

## How:

- Students will keep a **Curie/Baden-Powell Folder** with a **Curie/Baden-Powell Menu** and **Curie/Baden-Powell Record Sheets**.
- Parents are encouraged to help students record their accomplishments on their **Curie/Baden-Powell Record Sheets** and add up their points for a teacher to initial the completion of the challenge.
- Upon reaching **500 points**, your child will qualify for the **Marie Curie/Baden-Powell Challenge Award, 50 Carl Cash** and receive a Marie Curie/Baden-Powell Medal at the end of the year.

Please DOJO your teacher at Kay Carl with any questions. Many items from past challenges can be repeated for points. If you still have a requirement from last year memorized, please demonstrate for your teacher and earn the points for this year. Made items and past events cannot be used for the new challenge, unless you repeat the process (just do it again).

# Marie Curie/Baden Powell Challenge Award 2020-2021



Dear Kay Carl Elementary School Parents,

In an effort to encourage students to use their sense of wonder, go above and beyond classroom expectations, and establish a habit of striving for excellence, Kay Carl Elementary School students are encouraged to earn **Marie Curie/Baden-Powell Challenge** points throughout the school year. Points are earned as students explore science, technology, engineering, art, and math connections to the past, present, and future – and challenge themselves through a variety of self-paced, student-directed activities including memorization, investigation, problem-solving, interviews, field trips, readings, writing, web adventures, research, and presentation. Upon reaching **500 points**, your child will qualify for the **Marie Curie/Baden-Powell Challenge Award and 50 Carl Cash!** Students will keep a **Curie/Baden-Powell Folder** with a **Curie/Baden-Powell Menu** and **Curie/Baden-Powell Record Sheets**.

There is no limit to the number of Curie/Baden-Powell Challenge points students may accumulate. Parents may help students record their accomplishments on their Curie/Baden-Powell record sheets and add up their points. **All challenge points must be earned no later than May 1, 2021.** Students who achieve the Marie Curie/Baden-Powell Challenge Award will receive a Marie Curie/Baden-Powell medal for the 2020-2021 school year.

We are excited that your child is participating in the Marie Curie/Baden-Powell Challenge this year and hope he or she enjoys this learning adventure. Please feel free to help your child as he or she works at home and school to complete these meaningful and exciting challenges. Emailing your teacher pictures or videos of family field trips or at-home labs will allow the teacher to post them in the classroom so your child can share with their classmates. Your support and encouragement will help your student become a Curie or Baden-Powell in no time! Past items can be repeated for this year.

Please DOJO your child's teacher at Kay Carl with any questions.

Sincerely,

Brenda Swann

Kay Carl Elementary School Principal

K-2<sup>nd</sup> Grade Kay Carl Students wanted:  
**Marie Curie/Baden-Powell 2020-2021 Challenge:**

Complete the following challenges from the menu and earn Curie Challenge Points:

**1. Mathematical Facts to MEMORIZE**

- Skip count by 2's to 12 (20 Points) **2, 4, 6, 8, 10, 12**
- Skip count by 3's to 18 (20 Points) **3, 6, 9, 12, 15, 18**
- Skip count by 4's to 24 (20 points) **4, 8, 12, 16, 20, 24**
- Skip count by 5's to 100 (20 points) **5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100**
- Skip count by 10's to 100 (20 points) **10, 20, 30, 40, 50, 60, 70, 80, 90, 100**
- Pi to 10 digits (20 points) **3.1415926535**
- Pi to 20 digits (40 points) **3.14159265358979323846**
- Roman numerals 1 to 10 (20 points) **I, II, III, IV, V, VI, VII, VIII, IX, X**

**2. Science facts to memorize**

- Name 5 organs in the human digestive system and locate them. (30 points)  
**Mouth, tongue, esophagus, stomach, intestines**
- Name 6 bones in the human body and locate them. ( 30 Points)  
**Skull, ribs, humerus, femur, patella, phalanges**
- Name the first 5 elements of the periodic Table of Elements (50 points)  
**H, He, Li, Be, B**
- Name the next 5 elements of the periodic table of elements (50 points)  
**C, N, O, F, Ne**
- Name 3 simple machines. (30 points) or 6 simple machines (60 points)  
**Lever, wheel/axle, pulley, inclined plane, wedge, and screw**
- Name the 8 Planets in our solar system in this order: **Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune** (30 points)
- Name the worlds 5 major biomes (30 points)  
**Aquatic, dessert, forest, grasslands, tundra**

**3. Math Problems**

- Sudoku Puzzles-up to 10 (10 points each)
- Other teach-approved math problems (10 points each)
- IXL online math practice <http://www.ixl.com> up to 12 hours (20 points per hour)
- Code.org practice (10 points for every course passed at grade level or above)

**4. Additional Math or Science Class-** Before/After school math or science class-look for more information on DOJO (20 points per hour up to 100 points maximum per class)

**5. Math/Science Literature/ Book Report** (25 points each)

- Read a science or math book, write a sentence, and draw a picture about what you learned.
- Read a book about a famous scientist or mathematician, write a sentence, and draw a picture.

**6. Interviews-** prepare 5 questions to ask a scientist, engineer, or mathematician, interview the professional and record their answers. (50 points each)

## 7. At-Home Labs

- Repeat a lab investigation/experiment done in the science class, S.T.E.A.M. class and share your results. (20 points per lab)
- Conduct an investigation/experiment of your own choosing and share your results. (20 points per lab)

## 8. Technology Activities

- Create an electronic presentation (such as a video, PowerPoint, Google slide, etc.) on a math or science topic. (30 points each)
- Create an ORIGINAL Scratch project (not remixed) that is not part of the school curriculum, up to three projects. (30 points each)

## 9. Science/math/Technology Report

- Endangered Species Report- at least one page in length (50 points)
- Research paper- (at least one page in length) on math or science topic of your choice. (50 points each)

10. **Marie Curie, Thomas Edison, or Albert Einstein-** crossword Puzzle (30 points each)

11. **X-ray-** Bring in an x-ray to show and discuss with the class (30 points)

12. **Family Science Field trip-** Take a nature walk, go camping, visit a landform, National Park, science exhibit, science museum, or planetarium (20 points each) present pictures, videos, and/or items collected from the trip with the class for an additional (20 points each).

13. **Contests-** Participate in an approved math, science, or technology contest. (40 points each)

14. **Gardening-** Create and/or tend a small vegetable or flower garden, take pictures of it and share them with your class (40 points)

15. **Pet Care-** Take care of a pet for at least one week taking over all major responsibilities for the pet, take or draw pictures to show the class (40 points)

16. **Citizen Scientists-** Participate in the Lost Ladybug Project <http://lostladybug.org>, become a NASA Citizen Scientist <http://science.nasa.gov/citizen-scientists>, or choose another teacher-approved Citizen Scientist project (100 points possible each)

17. **Engineering-** Invent a prototype of something that solves a real-world problem and present it to the class. (up to 100 points possible)

18. **Morse Code-** Write your first and last name in Morse code. (60 points possible)

19. **Phonetic Alphabet-** Memorize the first half of the phonetic Alphabet: Alpha, Bravo, Charlie... (60 points)

20. **Teacher approved learning activities with a focus on math and science concepts-** Think of an idea then ask your teacher how many points you may earn (10 to 100 points possible each)

21. **Art-** Using the A in S.T.E.A.M. to create some form of art based item.




- Create a three view drawing of a complex object. (up to 20 points)
- Create a cardboard Automata with a story. <https://tinkering.exploratorium.edu/cardboard-automata> (20 points)

- Put on an original puppet show with paper bag puppets (20 points)
- Design and build a Rube Goldberg device with at least 7 steps. Take pictures or bring in a video of it working. (20 points)
- Make a Paper-circuit, squishy circuit, sewing circuit, scribble machine, or other creative circuit idea and explain how it works to the class. (20 points each) <https://tinkering.exploratorium.edu/projects>
- Create 5 light paintings with titles. (20 points) <https://tinkering.exploratorium.edu/light-painting>
- Learn the names and uses of 10 art tools, use five in an art project. (20 points)

## 22. Music- More of the A in STEAM

- Identify Note Names: Half note; Quarter note; Eighth note (10 Points)
- Identify 8 Elements of Music: (rhythm; melody; harmony; form; timbre; tempo; and dynamics) (10 Points)
- Identify lines and spaces of the treble staff: (Lines are: EGBDF) (Spaces are: FACE) (10 Points)
- Name 5 music symbols or signs: (15 points)

(Fermata  ) (Accent  ) (Treble clef sign  ) (Repeat sign  ) (Double bar lines

 ) (1<sup>st</sup> and 2<sup>nd</sup>s endings  ) (Coda sign  ) (15 Points)

- Perform in a musical performance (20pts)

## 23: Scouting Events- for our camping theme this year we are adding some more items.

- Learn to tie 5 knots and name them (30 points)
- Earn a badge, pin or other recognition item from a recognized group such as scouts or other organizations. (30 Points) Example: <https://youtu.be/JVUNQfDRjGk> Look up Springs Preserve Nature Badge.
- Go camping with your family (15 Points)
- Start a campfire with supervision, using only 2 matches or other methods (No lighters). (10 points)
- Set up a tent without adult help and sleep in it overnight. (10 points)
- Show how to use a compass. Identify the four cardinal directions (North, South East, and West) Identify the direction you would have to go, using degrees, to get to three destinations you can see. (20 points)
- Find out what pioneering is and make a useful item with the skills described (50 points)

## 24: First Aid-Be prepared for emergencies like a good scout

- Explain what first aid is. Tell what you should do after an accident. (10 Points)
- Show what to do for hurry cases of first aid: Serious bleeding, heart attack or sudden cardiac arrest, stopped breathing, stroke, poisoning (20 Points)
- Show how to help a choking victim. (10 Points)
- Show how to treat for shock. (10 Points)
- Demonstrate how to treat at least five of the following: A. Cuts and scratches, B. Burns and scalds, C. Sunburn, D. Blisters on the hand or foot, E. Tick bites, F. Bites and stings of other insects, G. Venomous snakebites, H. Nosebleed, I. Frostbite (20 points)
- Put together a simple home first-aid kit. Explain what you included and how to use each item correctly. (20 Points)
- Create and practice an emergency readiness plan for your home. (15 Points)
- Visit with a first responder or health care professional. (20 points)

# Family Field Trip Locations and Ideas

## **1. Las Vegas Natural History Museum** 900 Las Vegas Blvd N, Las Vegas, NV 89101

Learn about the animal kingdom and the history of human kind at the Las Vegas Natural History Museum. Filled with fascinating exhibits spanning through centuries from the dawn of time to modern day science, there are a wealth of exhibitions both permanent and temporary to explore.

## **2. Springs Preserve** 333 S Valley View Blvd, Las Vegas, NV 89107

Connect with nature at our award-winning Botanical Garden, home to the largest public collection of Mojave Desert plants. Come see where Las Vegas began! Walk, bike, or ride the train through our trails and discover native habitats and archaeological sites. Explore native Mojave Desert wildlife through live animal exhibits.

## **3. Shark Reef Aquarium** 3950 S Las Vegas Blvd, Las Vegas, NV 89119

Enjoy the interactive layout of the aquarium as it takes you on an action-packed journey through a slowly shrinking temple while showcasing a diverse selection of aquatic creatures, including over 100 sharks, exotic fish, reptiles, sea turtles, and more.

## **4. Spring Mountains Visitor Gateway** 2525 Kyle Canyon Road

Also known as Mount Charleston, The Spring Mountains National Recreation Area offers opportunities for year-round fun. Learn about the area by exploring our Spring Mountains Visitor Gateway, join an interpretative program or volunteer to conserve the forest environment!

**5. Red Rock Canyon National Conservation Area** 1000 Scenic Loop Dr, LV, NV 89161 Red Rock Canyon National Conservation Area lies in Nevada's Mojave Desert. It's known for geological features such as towering red sandstone peaks and the Keystone Thrust Fault, as well as Native American petroglyphs.

## **6. Sea Quest Aquarium** 3528 S Maryland Pkwy, Las Vegas, NV 89169

Get ready to go on an adventure through rainforests, deserts and the depths of the seas as you see, touch and feed more than 1200 animals.

**7. Discovery Children's Museum** 360 Promenade Place, Las Vegas, NV 89106 Home to nine themed exhibition halls, the 58,000-square-foot **museum** entices **children** of all ages with a well-rounded array of learning experiences that feel a whole lot more like play.

## **8. Lost City Museum** 721 S Moapa Valley Blvd, Overton, NV 89040

The Lost City Museum, originally known as the Boulder Dam Park Museum, was built in 1935 by members of the Civilian Conservation Corps. The National Park Service created the museum to exhibit artifacts recovered from local prehistoric archaeological sites, most of which were flooded when the Colorado River was dammed to form Lake Mead.

## **9. State Parks/National Parks**

<https://www.nps.gov/state/nv/index.htm> or <http://parks.nv.gov/parks/map>

# Marie Curie/Baden-Powell 2020-2021 K-2 Challenge

Name \_\_\_\_\_ Teacher \_\_\_\_\_

Challenge Name	Date	Points Earned	Your Initials	Teacher Initials
Skip count by 2's to 12 (20pts)				
Skip count by 3's to 18 (20pts)				
Skip count 4's to 24 (20pts)				
Skip count 5's to 100 (20pts)				
Skip count by 10's to 100 (20pts)				
Pi to 10 digits (20pts)				
Pi to 20 digits (40pts)				
Roman numerals 1 to 10 (20pts)				
Name 5 organs in the human digestive system and locate them. (30pts)				
Name 6 bones in the human body and locate them. (30pts)				
Name the first 5 elements of the periodic Table of Elements. (50pts)				
Name the next 5 elements of the periodic Table of Elements. (50pts)				
Name 3 simple machines. (30pts)				
Name 6 simple machines. (60pts)				
Name the 8 planets in our solar system in order. (30pts)				
Name the worlds 5 major biomes. (30pts)				
Sudoku Puzzles up to 10 (10pts)				
Other Teacher –approved math problems (10pts)				
IXL online math practice. (20 points per hour)				
Code.org practice. (10pts)				
Additional math or Science Class (20pts per hour)				
Science or Math book report (25pts)				
Scientist or mathematician report. (25pts)				
STEAM Interview (50pts)				
At-home Lab repeat (20pts)				
Your own investigation (20pts)				
Science or math electronic presentation (30pts)				
Original Scratch project. (30pts up to 3)				
Endangered Species Report (50pts)				
Research Paper (50pts)				
Marie Curie crossword Puzzle. (30pts)				
X-ray sharing (30pts)				
Family Science Field Trip (20pts)				
Family Science Field Trip Presentation (20pts)				
Math, Science or Technology Contest (40pts)				
Gardening (40pts)				
Pet Care (40pts)				
Citizen Scientist (100 pts possible)				
Invention prototype (up to 100 pts)				
Morse Code (60pts)				
Phonetic Alphabet (60pts)				
Teacher Approved Learning Activity (10 to 100pts)				
Create a 3 view drawing of a complex object (20pts)				





