

# SURVIVOR

Grades: 6-8



**Students:** Up to 30

**Contact Hours:** 12+ hours

*This program includes 12 days of activities, each designed to last about one hour. Use one lesson a day, clump them together into larger blocks or break them apart to be worked in one at a time throughout the course of a school year.*

**Recommended Settings:**

- Summer camps
- Middle school classrooms looking for hands-on STEM experiences
- After-school programs

**Pricing Options:**

- Complete Program: \$775<sup>00</sup>
- Refill kit: \$250
- Curriculum Printed Copy: \$295<sup>00</sup> \*
- Curriculum Digital Download: \$129<sup>00</sup> \*\*

**Curriculum Topics:**

- Day 1 - Welcome to Survivor Camp
- Day 2 - Water
- Day 3 - Purification
- Day 4 - Edible Plants
- Day 5 - The Elements
- Day 6 - Navigation: Pace and Measure Distance
- Day 7 - Navigation: Compasses
- Day 8 - Navigation: Scavenger Hunt
- Day 9 - Knots & Shelters
- Day 10 - Signal
- Day 11 - Lost!
- Day 12 - Surviving Boredom

**Assessment:**

Formative or summative assessment in the Check for Understanding section at the end of each lesson.

**Training Available:**

Professional development webinar training is available. Talk to a PCS STEAM Program Specialist for more information.

**Materials:**

*Survivor* comes with an Instructor's Manual, 5 printed sets of student curriculum pages, a digital curriculum download and all the supplies needed for 12 days of activities:

- Aluminum foil: 50 ft
- Bandanas: 7
- Cloth tape measure: 1
- Compasses: 10
- Dry erase marker: 5
- Dry erase pockets: 5
- Magnets: 8
- Masking tape, 60 yards: 1
- Paper clips: 100
- Paracord, 10 ft: 30
- Paracord buckles: 30
- Permanent marker: 1
- Playing cards: 2 decks
- Pony beads: 400
- PET water bottles with caps: 5
- Scissors: 1
- Storage tub: 1
- String, 450 ft: 1
- Tarps: 5
- Zip baggies, quart size: 100
- Plastic envelope (for holding student handouts): 1

\* *Print curriculum 1 Instructor Guide and a full printed set of student pages.*

\*\* *Digital curriculum comes with Instructor Guide only, which includes master copies of all student pages.*

**Shipping Availability:**

Contact a PCS STEAM Program Specialist for shipping options.

**Logistics & Storage:**

Each kit is shipped in a sturdy tub that can be reused to store the materials during camp and throughout the year.

The page protectors included in the kit are designed to eliminate the need for making new copies for each group of students. As learners write with dry erase markers on the heavy-duty plastic, the original copy stays untouched, ready for the next group as soon as the protector is wiped clean.

# Alignments & Standards

## Habits of Mind

- Applying Past Knowledge to New Situations
- Creating, Imagining, Innovating
- Finding Humor
- Gathering Data Through All the Senses
- Listening with Understanding and Empathy
- Managing Impulsivity
- Questioning and Posing Problems
- Persisting
- Remaining Open to Continuous Learning
- Responding with Wonderment and Awe
- Striving for Accuracy
- Taking Responsible Risks
- Thinking about Thinking
- Thinking and Communicating with Clarity and Precision
- Thinking Flexibly
- Thinking Interdependently

## 21st Century Skills

- Communication and Collaboration
- Creativity and Innovation
- Critical Thinking and Problem Solving
- Flexibility and Adaptability
- Information, Media, and Technology Literacy
- Initiative and Self-Direction
- Leadership and Responsibility
- Productivity and Accountability
- Social and Cross Cultural Skills

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## Common Core State Standards for Mathematics

- CCSS.MATH.CONTENT.6.RP.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
- CCSS.MATH.CONTENT.6.RP.A.3.D Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.
- CCSS.MATH.CONTENT.6.G.A.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.
- CCSS.MATH.CONTENT.7.NS.A.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
- CCSS.MATH.CONTENT.7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers.

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## International Society for Technology in Education (ISTE) Standards for Students

- ISTE-S.3.d Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.
- ISTE-S.4.a Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.
- ISTE-S.4.c Students develop, test and refine prototypes as part of a cyclical design process.
- ISTE-S.4.d Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.
- ISTE-S.7.c Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.

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## Next Generation Science Standards\*

- NGSS MS-LS1-3: Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.
- NGSS MS-LS1-6: Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.
- NGSS MS-LS1-7: Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.
- NGSS MS-PS1-4: Develop a model that predicts and describes changes in particle motion, temperature, and state of pure substance when thermal energy is added or removed.
- NGSS MS-PS3-3: Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.
- NGSS MS-PS4-2: Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.
- NGSS MS-ETS1-1: Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account the relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.
- NGSS MS-ETS1-2: Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
- NGSS MS-ETS1-3: Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

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