

Super STEM Movies...Vol. 3

The Games Maker

PG, 1995, 140 min

Ideas for Projects: Games, hot air balloons, puzzles, architecture, drawing, luck, probability, labyrinths, dreams, engineering, planned obsolescence

Top Scenes: Introduction scene of the “history of games” & Ivan creating his games

Big Question: What makes a great game? What is the best ratio of luck to skill for a game?

Further Study: Many games are thousands of years old. Research the history of games.

Paper Planes

Not Rated, 2014, 96 min

Ideas for Projects: Paper making machinery, eagles, flight, sailing, innovation, model rockets, airplanes, biomimicry, competitions, origami, papermaking, acupuncture, drones, lasers

Top Scenes: 5:07-8:06 The paper plane challenge, 17:06-21:11 Investigating flight

Big Question: Which can fly better: planes or birds?

Further Study: Study the history of flight & find a paper airplane competition (or start your own).

Queen of Katwe

PG, 2016, 124 min

Ideas for Projects: Chess, entrepreneurship, clean water, shelter, soccer, nutrition, hygiene, literacy, strategy, curiosity

Top Scenes: 15:27-16:15 “In chess, the small one can become the big one,” 18:00-19:34 Finding your “safe square”

Big Question: What kinds of ideas could help kids like Phiona rise out of difficult conditions or improve conditions in places like Katwe?

Further Study: Read the book Queen of Katwe & find a chess group in your area (or start your own).

Spare Parts

PG-13 2015, 114 min

Ideas for Projects: Underwater robotics, auto repair, engineering, drones, proof of concept, coding & programming, electricity, plumbing

Top Scenes: 23:28-25:05 The new mechanic & the prototype, 36:17-39:00 Buying the robot supplies

Big Question: Is engineering more theory & knowledge or building & application?

Further Study: Read the Wired Magazine article “La Vida Robot” by Joshua Davis & investigate robotics competitions.

Swiss Family Robinson

G, 1960, 126 min

Ideas for Projects: Simple machines, pulleys, navigation tools, knot tying, raft building, wildlife, animal husbandry, emergency shelters, edible wild plants, telescopes, tree houses, traps

Top Scenes: 34:00–38:00 Unveiling the tree house

Big Question: What if you had to colonize an uninhabited land? What would be your plan?

Further Study: Read the original classic book Swiss Family Robinson by Johann David Wyss.

Note: Movies are written, directed, & produced to tell a story and make money, not to be used an educational resource. Every movie should be previewed for content that may be inappropriate for your kids.

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