**Sci Fi Scyntis Curriculum**

|  |  |  |
| --- | --- | --- |
| **Plan (Four hours daily)** | **Topic** | **Lesson description** |
| **Week 1 Day 1** | **Intro to** **Sci Fi Scyntis** | **(Familiarization)** Dr. Mae Jemison, Neil Degrasse Tyson, Stephen Hawkins, Bill Nye, Michio Kaku, Space organizations & companies  |
| **Week 1 Day 2** | **Science** | **(Science)**Intro to scientific MethodPre-assessment Why we explore, why we venture. **Current trends** |
| **Week 1 Day 3** | **Technology Inquiry** | History/Future of space flight. Proven concepts & Innovative ideas. Intro to **Logic**, reason & **Decision making skills** |
| **Week 1 Day 4** | **Engineering Inquiry** | Man and **Environment**s I - Space(Artificial) Environments on Earth (Real) On a Starship (Idea) Biodome/ISS research |
| **Week 1 Day 5** | **Art & Creativity** | **(Film/Art )**- Buck Rogers to Star Trek. Sci Fi films |
| **Weekend****Assignment** | **STEAM Weekend** | Download and review apps/website list |
|  |  |  |
| **Week 2 Day 6** | **Science** | **(Familiarization)-** The Universe of Stellar Magnitude. Distance Measurements (Space) Metric System, Parsec, Light Year, Astronomical Units (A.U.) |
| **Week 2 Day 7** | **Technology Inquiry** | **(Familiarization)**- Large Man Made Vehicles**-** Review of mining, submarine/cruise ship Building & design, military/Anime craft |
| **Week 2 Day 8** | **Engineering Inquiry** | **(Science)-** of getting to Orbit/ Reentry - Payload cargo & costs.Space elevators |
| **Week 2 Day 9** | **Art & Creativity** | **(Film/Art)** -Objects in the Cosmos I- Lines, colors, shapes, forms, values, texture, (Star cluster, moon/alien landscapes paintings & photos.  |
| **Week 2 Day 10** | **Math**  | The Importance of **Math**. Practical applications on Earth, necessities in space, basics for civilization.  |
| **Weekend****Assignment** | **STEAM Weekend** | Draw/Create concept of starship Name & Logo. List 5 technologies you used over the weekend.  |
| **Plan (Four hours daily)** | **Topic** | **Lesson description** |
| **Week 3 Day 11** | **Science** | **Biology**: Microbes, soil, water (exoplanets & starship farms) Lunar soil, comet chemicals |
| **Week 3 Day 12** | **Technology Inquiry** | Telescopes (Backyard amateur to Orbital Hubble), Kepler, Chandra X ray, Hershel, Planck, Others. Light Lenses Star gazing basics. **(Astronomy)** |
| **Week 3 Day 13** | **Engineering Inquiry** | Fun Extrapolations Scientific look at SciFi’s different ships, size/shapes, construction **Math** |
| **Week 3 Day 14** | **Art & Creativity** | Starship concepts, Drawings, Pencil, Ink, Colors, Scale to model |
| **Week 3 Day 15** | **Math**  | Moving From A to B (XYZ axis) plotting courses, measuring distances, Navigation **Math** |
| **Weekend****Assignment** | **STEAM Weekend** | Download video game/Outline mission for starship. Where & why you want to go essay. **\*Apart of Starship Design Project**Begin Assessment writing essay |
|  |  |  |
| **Week 4 Day 16** | **Science** | Basic **Biology**: Plant & Animal Life in space? Vertical gardening group project  |
| **Week 4 Day 17** | **Technology Inquiry** | (Astronauts) Crew selection, resume building/Career choices What is needed Geologist, Biologists, Farmers, Military, etc. |
| **Week 4 Day 18** | **Engineering Inquiry** | Starship Power – Solar, chemical, fusion, hyper-drive, electro-magnetic basics ( Renewable ideas on Earth & Space) |
| **Week 4 Day 19** | **Art & Creativity** | Sci Fi Film The making of Interstellar (Matthew McConaughey) Episode of Cosmos (Neil Degrasse Tyson) |
| **Week 4 Day 20** | **Math**  | **Electronics** I Ohm’s Law, Wiring symbols, Resistor Color Code, AC/DC |
| **Weekend****Assignment** | **STEAM Weekend** | Download video game/ Outline mission for starship. Where & why you want to go. Complete Assessment writing essay |

|  |  |  |
| --- | --- | --- |
| **Plan (Four hours daily)** | **Topic** | **Lesson description** |
| **Week 5 Day 21** | **Science** | **Chemistry I** – Periodical Table Explained. Chemicals found in Space, Earth, our bodies. |
| **Week 5 Day 22** | **Technology Inquiry** | FTL (Faster than light) Travel Facts & Myths, theories & **Physics** basics  |
| **Week 5 Day 23** | **Engineering Inquiry** | **Physics** - Energy not created or destroyed, Starship engines, electrical, chemical, nuclear Physics basics |
| **Week 5 Day 24** | **Art & Creativity** | **Film/Art** – Star Trek/Voyager Episode- interior designs, living habitats, artificial gravity (group discussion) Discussion/drawing |
| **Week 5 Day 25** | **Math**  | **Electronics II** cont’d. Series Circuits |
| **Weekend****Assignment** | **STEAM Weekend** | Review Website list (Exploration, asteroid mining, Orbital base, terraforming, space port, etc.) |
|  |  |  |
| **Week 6 Day 26** | **Science** | **Physics** Basics- Intro to laws, velocity, acceleration, mass, force, potential & kinetic energy, gravity effects |
| **Week 6 Day 27** | **Technology Inquiry** | **Science** Intro to lasers – Uses & applications. (Navigation, communication, mining, weapons) |
| **Week 6 Day 28** | **Engineering Inquiry** | **Environment** Recycling- Ideas on Earth/Ideas in Space/other worlds |
| **Week 6 Day 29** | **Art & Creativity** | Colorful Universe – **Chemicals** & colors basics. Various Stars, Moons, exoplanet imagery |
| **Week 6 Day 30** | **Math**  | **Electronics III** cont’d. Parallel Circuits/ Intro to Arduino |
| **Weekend****Assignment** | **STEAM Weekend** |  Familiarization of Arduino Kit.  |

|  |  |  |
| --- | --- | --- |
| **Plan (Four hours daily)** | **Topic** | **Lesson description** |
| **Week 7 Day 31** | **Science** | **Physics** - Physics abroad a starship Microgravity/Artificial Theories about the body |
| **Week 7 Day 32** | **Technology Inquiry** | Crew (Astronauts)II Crew Selection**\*Apart of Starship Design Project** Specializations/ Working together |
| **Week 7 Day 33** | **Engineering Inquiry** | Asteroid Mining- Show me the money in Space. Future businesses & possibilities. |
| **Week 7 Day 34** | **Art & Creativity** | Art/Starship Concepts ICollect model parts/Draw to scale**\*Apart of Starship Design Project** |
| **Week 7 Day 35** | **Math**  | **Electronics IV** cont’d.Transistors, Capacitors, Resistors and parts |
| **Weekend****Assignment** | **STEAM Weekend** | Adrunio Kit assignment I |
|  |  |  |
| **Week 8 Day 36** | **Science** | Human **(Psychology)**Human Mind on Earth, in Space, Environments, work, play, comfort, society in space.  |
| **Week 8 Day 37** | **Technology Inquiry** | **(Science)-** The International Space StationLife on board the ISS |
| **Week 8 Day 38** | **Engineering Inquiry** | **(Engineering)**Probes, drones & rovers Sci Fi/ real examples |
| **Week 8 Day 39** | **Art & Creativity** | Art/Starship Concepts IICollect model parts Drawing to Scale |
| **Week 8 Day 40** | **Math**  | **Electronics**Robotics I Coding & Class project |
| **Weekend****Assignment** | **STEAM Weekend** | Writing Exercise/ArtYour 2 minute speech on “ 1st contact” introduction.  |

|  |  |  |
| --- | --- | --- |
| **Plan (Four hours daily)** | **Topic** | **Lesson description** |
| **Week 9 Day 41** | **Science** | **Physics** Intro to Kerbal Space Program |
| **Week 9 Day 42** | **Technology Inquiry** | **Computer**Intro to Blender Software |
| **Week 9 Day 43** | **Engineering Inquiry** | **Computer**Blender Software Cont’d. |
| **Week 9 Day 44** | **Art & Creativity** | **Computer**Art project with Blender |
| **Week 9 Day 45** | **Math**  | **Electronics**Robotics IIClass project cont.d |
| **Weekend****Assignment** | **STEAM Weekend** | Adrunio Kit assignment IIConsider speech for first contact.  |
|  |  |  |
| **Week 10 Day 46** | **Science** | The Brain- **Psychology** in SpaceHibernation Animal studiesPsychology, Mind and effect of sleep, Consciousness.  |
| **Week 10 Day 47** | **Technology Inquiry** | Guest Speaker **(TBA)/ Film** |
| **Week 10 Day 48** | **Engineering Inquiry** | Work on Starship model |
| **Week 10 Day 49** | **Art & Creativity** | **Film/Art**Give your 2 minute speech or 1st contact introduction. (Guest Speaker) |
| **Week 10 Day 50** | **Math**  | **Electronics**Robotics IIICoding/ Class Project cont’d.  |
| **Weekend****Assignment** | **STEAM Weekend** | Work on Starship ProjectYouTube Video Assignments |

|  |  |  |
| --- | --- | --- |
| **Plan (Four hours daily)** | **Topic** | **Lesson description** |
| **Week 11 Day 51** | **Science** |  Hazards in space – Radiation, solar flares, heat, cold |
| **Week 11 Day 52** | **Technology Inquiry** | Star Gates, Astral projection, and other Sci Fi travel theories |
| **Week 11 Day 53** | **Engineering Inquiry** | STEM Technology career trends Refresher/(Job application /Resume) |
| **Week 11 Day 54** | **Art & Creativity** | Present Starship Projects |
| **Week 11 Day 55** | **Math**  | **Electronics**Robotics IIIPresent Robot Projects |
| **Weekend****Assignment** | **STEAM Weekend** | **Review for Tests** |
|  |  |  |
| **Week 12 Day 56** | **Science** | **Science** Assessment/review |
| **Week 12 Day 57** | **Technology Inquiry** | **STEAM Test** |
| **Week 12 Day 58** | **Engineering Inquiry** | **Core Novus Presentation****Duty and purpose** |
| **Week 12 Day 59** | **Art & Creativity** | Dismissal Packages and rewards |
| **Week 12 Day 60** | **Math**  | Showcase Starships to Public |
|  |  |  |

**Sci Fi Scyntis Curriculum**