## Skynet Junior Scholars Professional Development Workshop Schedule

The SJS PD schedule shows the relevant Technological Pedagogical Content Knowledge (TPACK) elements of the various activities (TK = Technological Knowledge, CK = Content Knowledge, PK = Pedagogical Knowledge).

| Discussion Forum: Welcome and Introductions     Respond to video with Neil deGrasse Tyson: What do you see when you look up?     Exploration: First Light     Go over workshop structure     Discuss First Light Exploration (Skynet Live, Use multiple telescopes, Check Collaboration Observations, Imaging the Moon resource, Planet guidelines)     Activity: Sizing Up the Moon (relate to how big is your image)     Putting images into the Gallery     Earning your "Become a Skynet Junior Scholar" Badge     Weekly Survey  2. Explorating the Skynet Telescope Website     Exploration: Skynet Scavenger Hunt     Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science & Children, December 2010     Processing images using Afterglow (Histogram, Display tools, Align, Photometry)     Activity: Field of View     Activity: How Telescopes Focus Light     Questions about Scavenger Hunt     Introduce group project     Weekly survey (includes questions related to group project: topics of interest & availability for group check-ins)  3. Exposure Time     Investigable Question Discussion (on the Forum)     Exploration: Investigate Exposure Time     Investigable Question Discussion (on the Forum)     Exploration: Design Your Own Investigation     Activity: Pocket Solar System     Questions about Exposure Time, relate time to aperture size     Ckc Ckc     Check in on group project     Weekly Survey  4. Filters     Exploration: Investigate Filters     Activity: Fin with Filters     Introduce assignment for managing groups  |        | Activities  | TPACK   |
|--|--------|---|---------|
| <ul> <li>Discussion Forum: Welcome and Introductions</li> <li>Respond to video with Neil deGrasse Tyson: What do you see when you look up?</li> <li>Exploration: First Light</li> <li>Go over workshop structure</li> <li>Discuss First Light Exploration (Skynet Live, Use multiple telescopes, Check Collaboration Observations, Imaging the Moon resource, Planet guidelines)</li> <li>Activity: Sizing Up the Moon (relate to how big is your image)</li> <li>Putting images into the Gallery</li> <li>Earning your "Become a Skynet Junior Scholar" Badge</li> <li>Weekly Survey</li> </ul> 2. Exploring the Skynet Telescope Website <ul> <li>Exploration: Skynet Scavenger Hunt</li> <li>Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science &amp; Children, December 2010</li> <li>Processing images using Afterglow (Histogram, Display tools, Align, Photometry)</li> <li>Activity: Field of View</li> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> </ul> 3. Exposure Time <ul> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Design Your Own Investigation</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> </ul> 4. Filters <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce assignment for managing groups</li> </ul> 6. PK <ul> <li>PK</li> <li>PK</li></ul> |        |   | element |
| <ul> <li>Respond to video with Neil deGrasse Tyson: What do you see when you look up?</li> <li>Exploration: First Light</li> <li>Go over workshop structure</li> <li>Discuss First Light Exploration (Skynet Live, Use multiple telescopes, Check Collaboration Observations, Imaging the Moon resource, Planet guidelines)</li> <li>Activity: Sizing Up the Moon (relate to how big is your image)</li> <li>Putting images into the Gallery</li> <li>Earning your "Become a Skynet Junior Scholar" Badge</li> <li>Weekly Survey</li> </ul> 2. Exploration: Skynet Telescope Website <ul> <li>Exploration: Skynet Scavenger Hunt</li> <li>Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science &amp; Children, December 2010</li> <li>Processing images using Afterglow (Histogram, Display tools, Align, Photometry)</li> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins) 3. Exporation: Investigate Exposure Time <ul> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> </ul> </li> <li>4. Filters <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Activity: Fun with Filters</li> <li>Activity: Fun with Filters</li> <li>Activity: FM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> </li> <li>7. K</li> </ul>   | 1. We  |   |         |
| Lexploration: First Light   Go over workshop structure   | •      |   |         |
| <ul> <li>Exploration: First Light</li> <li>Go over workshop structure</li> <li>Discuss First Light Exploration (Skynet Live, Use multiple telescopes, Check Collaboration Observations, Imaging the Moon resource, Planet guidelines)</li> <li>Activity: Sizing Up the Moon (relate to how big is your image)</li> <li>Putting images into the Gallery</li> <li>Earning your "Become a Skynet Junior Scholar" Badge</li> <li>Weekly Survey</li> <li>Exploration: Skynet Scavenger Hunt</li> <li>Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science &amp; Children, December 2010</li> <li>Processing images using Afterglow (Histogram, Display tools, Align, Photometry)</li> <li>Activity: Field of View</li> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>3. Exposure Time</li> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Begin group project (groups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce assignment for managing groups</li> </ul>  | •      | Respond to video with Neil deGrasse Tyson: What do you see when you |         |
| Go over workshop structure Discuss First Light Exploration (Skynet Live, Use multiple telescopes, Check Collaboration Observations, Imaging the Moon resource, Planet guidelines) Activity: Sizing Up the Moon (relate to how big is your image) Putting images into the Gallery Earning your "Become a Skynet Junior Scholar" Badge Weekly Survey  2. Exploring the Skynet Telescope Website Exploration: Skynet Scavenger Hunt Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science & Children, December 2010 Processing images using Afterglow (Histogram, Display tools, Align, Photometry) Activity: Field of View Activity: How Telescopes Focus Light Questions about Scavenger Hunt Introduce group project Weekly survey (includes questions related to group project: topics of interest & availability for group check-ins)  3. Exposure Time Investigable Question Discussion (on the Forum) Exploration: Investigate Exposure Time Phack Exploration: Design Your Own Investigation Activity: Pocket Solar System Questions about Exposure Time, relate time to aperture size Check in on group project Weekly Survey  4. Filters Exploration: Investigate Filters Activity: Fun with Filters Introduce assignment for managing groups PK CK  |        |   |         |
| <ul> <li>Discuss First Light Exploration (Skynet Live, Use multiple telescopes, Check Collaboration Observations, Imaging the Moon resource, Planet guidelines)</li> <li>Activity: Sizing Up the Moon (relate to how big is your image)</li> <li>Putting images into the Gallery</li> <li>Earning your "Become a Skynet Junior Scholar" Badge</li> <li>Weekly Survey</li> <li>Exploration: Skynet Scavenger Hunt</li> <li>Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science &amp; Children, December 2010</li> <li>Processing images using Afterglow (Histogram, Display tools, Align, Photometry)</li> <li>Activity: Field of View</li> <li>Activity: Field of View</li> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>Exploration: Investigate Exposure Time</li> <li>Begin group project (groups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Ck Ck</li> <li>Ck Ck</li> <li>Ck Ck</li> <li>Check in on group project</li> <li>Weekly Survey</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Exploration: Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul>  | •      |   | TK      |
| Check Collaboration Observations, Imaging the Moon resource, Planet guidelines)  Activity: Sizing Up the Moon (relate to how big is your image)  Putting images into the Gallery Earning your "Become a Skynet Junior Scholar" Badge Weekly Survey  2. Exploring the Skynet Telescope Website Exploration: Skynet Scavenger Hunt Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science & Children, December 2010 Processing images using Afterglow (Histogram, Display tools, Align, Photometry) Activity: Field of View Activity: Field of View Activity: How Telescopes Focus Light Introduce group project Weekly survey (includes questions related to group project: topics of interest & availability for group check-ins)  3. Exposure Time Investigable Question Discussion (on the Forum) Exploration: Investigate Exposure Time Investigable Question Discussion (on the Forum) Exploration: Design Your Own Investigation Activity: Pocket Solar System Questions about Exposure Time, relate time to aperture size Ck Ck Questions about Exposure Time, relate time to aperture size Ck Ck Weekly Survey  4. Filters Exploration: Investigate Filters Exploration: Investigate Filters Activity: Fun with Filters Exploration: Investigate Filters Activity: Fun with Filters Introduce mentor scientists: Astronomer Guest Chat about Filters Activity: EM Spectrum War Introduce assignment for managing groups   | •      | •   |         |
| guidelines) Activity: Sizing Up the Moon (relate to how big is your image) Putting images into the Gallery Earning your "Become a Skynet Junior Scholar" Badge Weekly Survey  2. Exploring the Skynet Telescope Website Exploration: Skynet Scavenger Hunt Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science & Children, December 2010 Processing images using Afterglow (Histogram, Display tools, Align, Photometry) Activity: Field of View Activity: How Telescopes Focus Light Ueestions about Scavenger Hunt Introduce group project Weekly survey (includes questions related to group project: topics of interest & availability for group check-ins)  3. Exposure Time Investigable Question Discussion (on the Forum) Exploration: Investigate Exposure Time Segin group project (groups assigned at start of week) Exploration: Design Your Own Investigation Activity: Pocket Solar System Questions about Exposure Time, relate time to aperture size Ck   | •      |   | TK, CK  |
| <ul> <li>Activity: Sizing Up the Moon (relate to how big is your image)</li> <li>Putting images into the Gallery</li> <li>Earning your "Become a Skynet Junior Scholar" Badge</li> <li>Weekly Survey</li> <li>2. Exploring the Skynet Telescope Website</li> <li>Exploration: Skynet Scavenger Hunt</li> <li>Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science &amp; Children, December 2010</li> <li>Processing images using Afterglow (Histogram, Display tools, Align, Photometry)</li> <li>Activity: Field of View</li> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>3. Exposure Time</li> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Begin group project (groups assigned at start of week)</li> <li>PACK</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Ck</li> <li>Check in on group project</li> <li>Weekly Survey</li> <li>4. Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul>  |        |   |         |
| <ul> <li>Putting images into the Gallery</li> <li>Earning your "Become a Skynet Junior Scholar" Badge</li> <li>Weekly Survey</li> </ul> 2. Exploring the Skynet Telescope Website <ul> <li>Exploration: Skynet Scavenger Hunt</li> <li>Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science &amp; Children, December 2010</li> <li>Processing images using Afterglow (Histogram, Display tools, Align, Photometry)</li> <li>Activity: Field of View</li> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins) 3. Exposure Time <ul> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> </ul> 4. Filters <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> 7K <ul> <li>CK</li> <li>CK</li> <li>PK</li> </ul> 7K <ul> <li>CK</li> <li>CK</li> <li>CK</li> <li>CK</li> <li>CK</li> <li>CK</li> <li>CK</li> <li>CK</li> </ul> 7K <ul> <li>CK</li> </ul> CK <ul> <li>CK</li> <li>CK</li></ul></li></ul>                      |        | <u> </u>  |         |
| <ul> <li>Earning your "Become a Skynet Junior Scholar" Badge</li> <li>Weekly Survey</li> <li>Exploring the Skynet Telescope Website</li> <li>Exploration: Skynet Scavenger Hunt</li> <li>Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science &amp; Children, December 2010</li> <li>Processing images using Afterglow (Histogram, Display tools, Align, Photometry)</li> <li>Activity: Field of View</li> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>3. Exposure Time</li> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul>   | •      |   |         |
| Weekly Survey  2. Exploring the Skynet Telescope Website     Exploration: Skynet Scavenger Hunt     Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science & Children, December 2010     Processing images using Afterglow (Histogram, Display tools, Align, Photometry)     Activity: Field of View     Activity: How Telescopes Focus Light     Questions about Scavenger Hunt     Introduce group project     Weekly survey (includes questions related to group project: topics of interest & availability for group check-ins)  3. Exposure Time     Investigable Question Discussion (on the Forum)     Exploration: Investigate Exposure Time     Begin group project (groups assigned at start of week)     Exploration: Design Your Own Investigation     Activity: Pocket Solar System     Questions about Exposure Time, relate time to aperture size     Check in on group project     Weekly Survey  4. Filters     Exploration: Investigate Filters     Activity: Fun with Filters     Exploration: Investigate Filters     Activity: Fun with Filters     Introduce mentor scientists: Astronomer Guest Chat about Filters     Activity: EM Spectrum War     Introduce assignment for managing groups   | •      |   |         |
| 2. Exploring the Skynet Telescope Website  | •      |   | PK      |
| <ul> <li>Exploration: Skynet Scavenger Hunt</li> <li>Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science &amp; Children, December 2010</li> <li>Processing images using Afterglow (Histogram, Display tools, Align, Photometry)</li> <li>Activity: Field of View</li> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>Exposure Time</li> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>CK</li> <li>CK</li> <li>Weekly Survey</li> <li>Exploration: Investigate Filters</li> <li>Exploration: Investigate Filters</li> <li>Exploration: Investigate Filters</li> <li>Exploration: Investigate Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>PK, CK</li> <li>Introduce assignment for managing groups</li> </ul>   | •      | ,   |         |
| <ul> <li>Read article: A Quest To Improve: Helping students learn how to pose investigable questions. Science &amp; Children, December 2010</li> <li>Processing images using Afterglow (Histogram, Display tools, Align, Photometry)</li> <li>Activity: Field of View</li> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>3. Exposure Time</li> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Begin group project (groups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> <li>4. Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul>  | 2. Exp | - · · · · · · · · · · · · · · · · · · ·                             |         |
| <ul> <li>investigable questions. Science &amp; Children, December 2010</li> <li>Processing images using Afterglow (Histogram, Display tools, Align, Photometry)</li> <li>Activity: Field of View</li> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>3. Exposure Time</li> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Exploration: Qroups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>CK</li> <li>Check in on group project</li> <li>Weekly Survey</li> <li>4. Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul>   | •      |   |         |
| <ul> <li>Processing images using Afterglow (Histogram, Display tools, Align, Photometry)</li> <li>Activity: Field of View</li> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>3. Exposure Time <ul> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Begin group project (groups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> </ul> </li> <li>4. Filters <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> </li> </ul>   | •      | •                             | PK      |
| Photometry) Activity: Field of View Activity: How Telescopes Focus Light Questions about Scavenger Hunt Introduce group project Weekly survey (includes questions related to group project: topics of interest & availability for group check-ins)  3. Exposure Time Investigable Question Discussion (on the Forum) Exploration: Investigate Exposure Time Begin group project (groups assigned at start of week) Exploration: Design Your Own Investigation Activity: Pocket Solar System Questions about Exposure Time, relate time to aperture size CK CK Check in on group project Weekly Survey  4. Filters Activity: Fun with Filters Activity: Fun with Filters Introduce mentor scientists: Astronomer Guest Chat about Filters Activity: EM Spectrum War Introduce assignment for managing groups  CK  |        |   |         |
| <ul> <li>Activity: Field of View</li> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>3. Exposure Time <ul> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Begin group project (groups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> </ul> </li> <li>4. Filters <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Activity: Fun with Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> </li> <li>CK</li> <li>PK, TK</li> </ul>   | •      |   | TK, CK  |
| <ul> <li>Activity: How Telescopes Focus Light</li> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>3. Exposure Time <ul> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Begin group project (groups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> </ul> </li> <li>4. Filters <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> </li> </ul>  |        |   |         |
| <ul> <li>Questions about Scavenger Hunt</li> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>3. Exposure Time  <ul> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Begin group project (groups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Ck</li> <li>Check in on group project</li> <li>Weekly Survey</li> </ul> </li> <li>4. Filters  <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> </li> </ul>  |        | ·   |         |
| <ul> <li>Introduce group project</li> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>3. Exposure Time <ul> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Begin group project (groups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> </ul> </li> <li>4. Filters <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> </li> </ul>  |        |   |         |
| <ul> <li>Weekly survey (includes questions related to group project: topics of interest &amp; availability for group check-ins)</li> <li>3. Exposure Time <ul> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Begin group project (groups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Ck</li> <li>Check in on group project</li> <li>Weekly Survey</li> </ul> </li> <li>4. Filters <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> </li> </ul>   |        |   | TK, PK  |
| interest & availability for group check-ins)  3. Exposure Time  • Investigable Question Discussion (on the Forum)  • Exploration: Investigate Exposure Time  • Begin group project (groups assigned at start of week)  • Exploration: Design Your Own Investigation  • Activity: Pocket Solar System  • Questions about Exposure Time, relate time to aperture size  • CK  • Check in on group project  • Weekly Survey  4. Filters  • Exploration: Investigate Filters  • Activity: Fun with Filters  • Activity: Fun with Filters  • Activity: EM Spectrum War  • Introduce assignment for managing groups  PK  • PK, TK   |        |   |         |
| 3. Exposure Time  Investigable Question Discussion (on the Forum)  Exploration: Investigate Exposure Time Begin group project (groups assigned at start of week) Exploration: Design Your Own Investigation Activity: Pocket Solar System Questions about Exposure Time, relate time to aperture size CK Check in on group project Weekly Survey  4. Filters Exploration: Investigate Filters Activity: Fun with Filters Introduce mentor scientists: Astronomer Guest Chat about Filters Activity: EM Spectrum War Introduce assignment for managing groups  PK PK PK PK PK TTR  TTR  CK  CK  TPACK  CK  PK CK  PK CK  PK TTR  CK  PK CK  PK TTR  PK TTR  PK TTR  PK TTR  | •      |   |         |
| <ul> <li>Investigable Question Discussion (on the Forum)</li> <li>Exploration: Investigate Exposure Time</li> <li>Begin group project (groups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> <li>4. Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul>   | 0 -    |   |         |
| <ul> <li>Exploration: Investigate Exposure Time</li> <li>Begin group project (groups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> <li>Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul>   | _      |   | DIC     |
| <ul> <li>Begin group project (groups assigned at start of week)</li> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul>  |        |   |         |
| <ul> <li>Exploration: Design Your Own Investigation</li> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> </ul> 4. Filters <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> TPACK <ul> <li>CK</li> <li>PK, CK</li> <li>PK, TK</li> </ul>   | •      |   |         |
| <ul> <li>Activity: Pocket Solar System</li> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> </ul> 4. Filters <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> CK <ul> <li>PK, CK</li> <li>PK, TK</li> </ul>  | •      |   |         |
| <ul> <li>Questions about Exposure Time, relate time to aperture size</li> <li>Check in on group project</li> <li>Weekly Survey</li> </ul> 4. Filters <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> CK <ul> <li>PK, CK</li> <li>PK, TK</li> </ul>   |        |   |         |
| <ul> <li>Check in on group project</li> <li>Weekly Survey</li> <li>Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul>   |        |   |         |
| <ul> <li>Weekly Survey</li> <li>4. Filters         <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> </li> </ul>   |        | •                             |         |
| <ul> <li>4. Filters</li> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul>  |        |   | IFACK   |
| <ul> <li>Exploration: Investigate Filters</li> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> CK PK, TK  |        | <u> </u>  |         |
| <ul> <li>Activity: Fun with Filters</li> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> </ul> CK PK, TK  |        |   |         |
| <ul> <li>Introduce mentor scientists: Astronomer Guest Chat about Filters</li> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> <li>PK, CK</li> <li>PK, TK</li> </ul>  |        | •   | CK      |
| <ul> <li>Activity: EM Spectrum War</li> <li>Introduce assignment for managing groups</li> <li>PK, TK</li> </ul>  |        | •   |         |
| Introduce assignment for managing groups     PK, TK  | •      |   |         |
|  | •      |   |         |
| Leader roles and responsibilities  |        |   | ,       |
| Permissions: account and research  |        | •   |         |

| <ul> <li>Creating accounts</li> </ul>   |        |
|---|--------|
| <ul> <li>only code names, no name.name accounts for youth</li> </ul>                          |        |
| <ul> <li>passwords 8 characters or more</li> </ul>  |        |
| <ul> <li>Youth Pre-Survey Research</li> </ul>   |        |
| <ul> <li>Giving Time</li> </ul>   |        |
| <ul> <li>Introducing Explorations and Badge Checklist</li> </ul>                              |        |
| Weekly Survey   |        |
| 5. Guiding your youth through Skynet projects   |        |
| <ul> <li>Leader roles &amp; responsibilities - assignment to get practice managing</li> </ul> | PK, TK |
| groups  | -      |
| • Tips / techniques for working with youth  | PK     |
| Have you earned your Become a Skynet Junior Scholar badge?                                    | TK, CK |
| Checking the checklist for Leaders  | ,      |
| • Activity: The Cosmos in Perspective   | CK     |
| Introduce Comets to Cosmology, Asteroids  | CK     |
| Review roles & responsibilities, and working with youth                                       | PK, TK |
| <ul> <li>Encouraging forum posts</li> </ul>   | ,      |
| <ul> <li>Checking student work - youth earning badges.</li> </ul>                             |        |
| <ul> <li>Program Conclusions - post research survey for youth</li> </ul>                      |        |
| Deactivating accounts   |        |
| Youth who want to continue on their own   |        |
| <ul> <li>Email astrosjs.staff that program is over so telescope time can be</li> </ul>        |        |
| retrieved   |        |
| Weekly Survey   |        |
|   |        |
| Retrospective Leader Research Survey  |        |
| 6. Wrap-up  |        |
| Overview of checklist / guide for using SJS   | TDACK  |
| Webinar: presentation of group projects   | TPACK  |
| Awarding Leader Badges!   |        |
| Weekly Survey   |        |