



Lesson 9: **We Are Stardust!**

Scene 15: "Pumbaa and Timon Wax Philosophical"

You-Tube Video: "The Live in You"

You-Tube Video (optional): Neil de Grasse Tyson

Script-reading: "Lion King"

Script-reading: "Startull" Parable

Objectives:

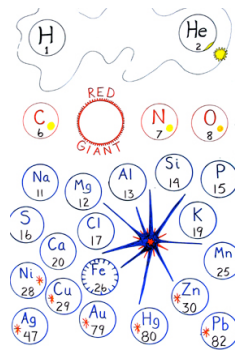
1. To give the youth an opportunity to learn and reflect on the wondrous scientific fact that **we are made of stardust** and that we all have **magnificent ancestors**.
2. To offer opportunities for playful expression in **dramatic script readings**.
3. To demonstrate that **science, value, and meaning** can contribute to **spirituality** and **religious experience**.
4. To share ideas on contents to go into the **"Time Capsules"** and **"Circle of Life Recycling"** projects that were introduced in the previous lesson.

Materials:

- **chime or bell**
- *The Lion King* DVD and DVD player. Before class, **put Disk 1** into the player and cue it up to **Scene 15**, "Pumbaa and Timon Wax Philosophical," then pause it.
- Print out **1 set of Lion King scripts** for 4 youth volunteers to re-enact the central dialogues of Scenes 5 and 15. (Download the scripts at: <http://thegreatstory.org/lion-king.pdf>)
- Print out **1 set of Startull Parable scripts** for 4 youth volunteers to enact the 15-minute parable on stardust called, "Startull: The Story of an Average Yellow Star." It can be downloaded here: <http://thegreatstory.org/stardust-parable.pdf>
- (Optional): **Purchase ½ yard each of wrinkle-free fabric** for use as the **4 scarves** recommended for the actors performing the Startull Parable: 2 pure yellow pieces of fabric (1 for Startull and the other for Elder Yellow

Star); 1 bright red fabric (for when the Elder Yellow star becomes a Red Giant); and 1 bright blue scarf (for Big Blue).

- Photocopies of the **Stardust Chart** at <http://thegreatstory.org/charts/hi-res-photos-stardust.html> Drag off the hi-res chart that looks like this:



- Extra copies of **Human Circle of Life Diagram**
- Extra copies of **CHECKLIST for Time Capsule** contents handed out during the previous lesson.
- **The lock box with the journals**, plus extras for any newcomers, and pens and colorful markers.
- **You-Tube video** of Lion King on Broadway song: "They Live in You" (**4 minutes**). This was first watched at the end of Lesson 5. It can be found at: <http://www.youtube.com/watch?v=ryhsIEPIUH0>
- **OPTIONAL: 10 minute You-Tube video of top astrophysicist emotionally extolling on "We are made of stardust" theme.** (Note: Neil deGrasse Tyson is the director of Hayden Planetarium in New York City and has been the host of many television science shows.) The You-Tube video is titled, "Neil deGrasse Tyson – The Best Sermon Ever" <http://www.youtube.com/watch?v=0Ai-VvboPnA>

Author's note: This truly is the best sermon ever! Tyson is an African-American, and he is the Carl Sagan of our era. If class time is more than an hour, see if you can squeeze in this video. Possibly use it at the end instead of the You-Tube closing song video. Or put it right into the Stardust discussion time when the Stardust chart of chemical elements is being discussed. Otherwise, it can be played during the final celebratory weekend session, when a bunch of other YouTube Lion King videos can be played, too.

ACTIVITIES: DVD watching; discussion; dramatic reading of Lion King script; dramatic reading of Stardust Parable; journal-writing; song



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Classroom preparation:

- Before class, cue up **Disk 1** of the DVD to **Scene 15**: "Pumbaa and Timon Wax Philosophical." Cover monitor with cloth.
- Have ready to pass out **photocopies of the Stardust Chart** (which shows in which kind of star each of the various chemical elements is created). The Startull Parable will teach the science of that chart during the dramatic script reading, and, surely, at least one youth in the class will know the science of it and can explain it to the rest, if they wish. But the teacher might want to peruse a quick overview of the science before class by reading this webpage: <http://thegreatstory.org/Stardustbackground.html>
- Have accessible **1 set of Lion King scripts** for 5 youth volunteers to re-enact the central dialogues of Scene 5 and 15.
- Have accessible **1 set of Startull Parable scripts** for 4 youth volunteers to act out the 15-minute parable on stardust called, "Startull: The Story of an Average Yellow Star." Have accessible the **4 colorful scarves** for each character to wear (if you decided to purchase the fabric, as recommended)
- Set out extra copies of the **"Human Circle of Life Diagram"** and the **"Time Capsule Checklist"** (both of which were used in previous lessons).
- Put the **Lock Box** of **journals** onto a table; have **extra journals** available for newcomers, colorful pens and markers.
- Have the **chime** or **bell** accessible.
- Have accessible the **You-Tube (disk or computer online)** of **"They Live in You"** song stage performance (which was already used in Lesson 5)
<http://www.youtube.com/watch?v=ryhsIEPIUH0>

Lesson flow:

1. **Share ideas of Time Capsule contents**, based on youth experiences at home this past week. **(5 mins)**
2. **DVD:** Watch **Scene 15** **(4 mins)**
3. **4 volunteers** re-enact Lion King dialogue by **script-reading** **(5 mins)**
4. Pass out copies of the **Stardust Chart** (chemical elements) **(1 mins)**
5. **Discussion** of the **Lion King scenes** that were just dramatized in the scripts and the **Stardust Chart** **(10 mins)**
6. **4 volunteers** read/perform the **"Startull" Parable scripts** **(20 mins)**
7. **journal** for remaining time, leaving 5 minutes for the closing **(flexible)**
8. Closing: Watch the **You-Tube** "They Live in You" song performance **(5 mins)**

• **OPTIONAL: 10 minute You-Tube video of top astrophysicist emotionally extolling on "We are made of stardust" theme.** (Note: Neil deGrasse Tyson is the director of Hayden Planetarium in New York City and has been the host of many television science shows.) The You-Tube video is titled, "Neil deGrasse Tyson – The Best Sermon Ever"

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GUIDE:

*[Recruit someone who has not been very active in class to pass out **the journals to everyone.**]*

Recollections from prior week (5 mins)

GUIDE:

"Those of you who were here **last week** will remember that we began thinking of constructing a personal **"Time Capsule"** for each of us, and that we passed out a **checklist** of items you might want to think about putting into the Time Capsule. As you get your **journal**, see if you stuck your Time Capsule checklist into it. If not, there are extras.

Q: "Who **wasn't here** last week? . . ."

*[Pass out **Time Capsule Checklist** to those who don't already have it.]*

Q: "**Who would like to describe** what a Time Capsule is for and what goes into it?"

Q: "Did any of you **start sorting** among your possessions to decide upon items to put into your Time Capsule?"

Q: "Any **examples** of items you found to put into your Time Capsule that you would like to share with the group?"

DVD Viewing: Scene 15 (4 mins)

Scene 15, "Pumbaa and Timon Wax Philosophical," starts at 50:36 into the movie. Continue on through the end of that scene, which ends at 53:44.

[You know it **ends when Rafiki says "It is time"** , just after he puts fresh paint on the image of baby Simba. If Timon and Pumbaa start singing in the jungle, you have gone too far.]

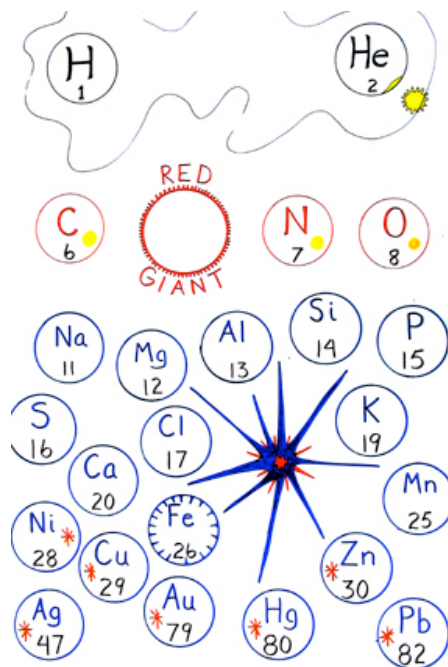
Lion King Script Reading (4 volunteers) (5 mins)

[**Ask for 4 volunteers** to play the roles of SIMBA, MUFASA, PUMBAA, and TIMON to re-enact the star scene from an earlier episode and then the star scene we just watched. You take the role of narrator.]

"It's really easy and fun. There's a script for you to read."

Stardust Chart and Discussion (10 mins)

[Pass out the Stardust Chart]:



[Begin discussion by asking]:

Q: "So who is right? Timon, Pumbaa, or Simba?"

[Hopefully, some youth will point out that Pumbaa gives the **scientific** answer and that Simba's answer is **symbolically** correct. That is, stars are not actually the great kings of the past, but they are our ancestors.]

*[Draw attention to the chart, which shows that **the chemical elements in our bodies were created inside ancestor stars** — Red Giants created most of the carbon (C), nitrogen (N), and oxygen (O). Big blue stars that explode as supernovas created all the heavier atoms. **See if anyone in class knows the science** well enough to explain it to the rest.]*

Q: “Does anybody remember when they first learned that “**we are made of stardust**” or when you **felt some special relationship to the stars** because of that understanding?”

Startull Parable Script Reading (20 mins)

*[Ask for 4 volunteers to play the roles of NARRATOR, STARTULL, ELDER YELLOW STAR AND BIG BLUE. Pass out the **colorful scarves**, if you have them.]*

GUIDE:

“This is a **modern-day story** that playfully explains the science underlying the **chemistry of stardust**. Because it is also a **parable**, that means it also contains **values teachings**, so it is now widely used in liberal religious settings such as ours. So, while you are enjoying **acting in or watching** the parable, see if you notice some of the values teachings that it contains.”

“The whole script will take **about 15 minutes** for the volunteers to perform.”

Journaling (if there is time)

*[Leave **5 minutes** for the closing You-Tube song.]*

Closing Song (5 mins)

*[Play the 4-minute **You-Tube song video** from the Lion King on-Broadway performance. The song is “**They Live in You**”.] **5 minutes***