

From Observation to Creation

Lion Lights

Richard Turere was an eleven-year-old boy in Kenya when one morning, upon entering the stable, he found that one of his family cows had been killed. Lion attack!

1) Richard의 가족 뿐 아니라 많은 그의 이웃들은 같은 문제를 견디고 있었다.

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Some people who had lost animals to the lions wanted to kill the lions to protect their remaining cows and goats.

2) 하지만 그것은 또 다른 문제를 불러일으킬 것이었다. 왜냐하면 사자는 케냐의 가장 큰 관광 목적이고 법적으로 보호를 받고 있었기 때문이었다.

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In addition, their numbers are decreasing.

3) Richard의 가족은 순서를 정해 밤에 축사에서 암소들을 지켰다.

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Still, when everyone was asleep, lions were able to get through the fence. Richard first set up a series of torches on the fence. He knew lions were afraid of fire. What he did not know was how smart lions are.

4) 주변에 사람이 아무도 없다는 것을 알아차렸을 때, 사자들은 어쨌거나 축사로 들어와 암소들을 공격했다.

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Next, Richard set up scarecrows. They were of no use, either. He had to find a way to stop the lions before he lost another cow!

Richard observed the lions' behavior. One night, he took a torch and walked around the stable.

5) 그는 사자들이 밖의 어둠 속에 있다는 것을 느낄 수 있었지만 사자들은 누군가가 암소들을 지키기 위해 돌아다니고 있다는 것을 안다면 가까이 오지 않을 것이었다.

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Then he had an idea— a moving torch!

6) 사자들에게 움직이는 횃불은 사람이 그것을 들고 있다는 것을 의미할 수밖에 없고, 이는 사자들이 축사에 접근하는 것을 막을 수 있을 것이었다.

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How, he thought to himself, could he make it appear that a torch was moving?

7) 많은 시행착오 끝에 Richard는 마침내 반짝이는 LED 전구 장치를 만들었는데, 그것은 태양 전지로 충전되는 낡은 자동차 배터리로 작동되었다.

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Richard set the lights up along the fence. At night, the lights could be seen from outside the stable and took turns flashing, which appeared as if people were moving around with torches.

8) 사자들은 두 번 다시 Richard의 울타리를 넘어가지 않았다.

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Richard called his system Lion Lights.

9) 이러한 간단하고도 실용적인 장치는 사자에게 아무런 해도 가하지 않았고, 인간과 가축, 사자들은 마침내 서로 평화롭게 지낼 수 있게 되었다.

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Lion Lights also work for other wild animals. Richard's Lion Lights are now being used all over Kenya.

Sensor Socks

Kenneth Shinozuka was a child when a police officer brought his grandfather home.

10) 할아버지는 거리를 목적 없이 배회하다가 발견되었다.

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He did not remember when and how he had gotten there.

11) 할아버지가 알츠하이머를 앓고 계신다는 것이 밝혀졌다. 알츠하이머는 환자의 기억과 생각하는 능력을 천천히 빼앗아 가 버리는 뇌 질환이다.

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Going to middle school, Kenneth often looked after his grandfather. When his grandfather got up and started to wander, Kenneth followed him to protect him from danger.

12) Kenneth는 할아버지를 따라다니면서 그가 할아버지를 돕기 위해 할 수 있는 일이 더 있을지 궁금했다.

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His grandfather was safe when he stayed in his room.

13) 문제는 할아버지가 안전한 방에서 나서면 어디로 갈지 알 수 있는 방법이 없다는 것이었다.

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That required that someone stay with him all the time.

One night, a spark of hope crossed Kenneth's mind. When Kenneth watched as his grandfather got up and stepped down onto the floor as usual, an idea struck him. To walk, a person must first step down on their feet.

14) 만약 환자의 걸음이 나막신과 같은 큰 소리를 낸다면 돌보는 사람을 깨울 수 있을 것이다.

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But it will also wake up others who are sleeping nearby. "No, it's not practical," Kenneth thought.

15) 깨우고 싶은 사람에게만 일종의 신호를 보내는 것이 가능할까?

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There must be some sensors for this purpose. How could the signals be received? Kenneth's thinking started to speed up.

16) 그는 마침내 발꿈치에 센서가 부착된 양말과 모니터로서 작동하는 스마트폰으로 구성된 장치를 생각해냈다.

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The sensors had to be thin enough to be comfortable on the bottom of a foot.

17) Kenneth는 몇 가지의 다른 재료들로 시도한 끝에 작은 배터리로 작동하는 필름 센서를 만들어냈다.

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Next, he studied programming to code an app that would transform a smartphone into a monitor.

18) Kenneth가 마침내 만들어낸 장치는 계획대로 작동했다.

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When his grandfather started to walk, the sensors sent signals to the paired smartphone, raising an alarm. And then the smartphone worked as a monitor that showed his grandfather's movements. Kenneth's sensor socks were recognized at a science fair.

19) 그는 장치를 개선해서 그것이 필요한 알츠하이머 환자들에게 나누어 줄 것을 계획했다.

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Richard and Kenneth tried to draw creative ideas from observation and turn them into reality.

Richard's careful observation of lions' behavior eventually brought peace to his village.

20) 배회하는 할아버지에 대한 Kenneth의 관찰은 알츠하이머 환자들을 돕는 장치의 개발로 이어졌다.

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If you observe your surroundings with fresh eyes, something great can happen. Try it. Who knows what might come of it



◇「콘텐츠산업 진흥법 시행령」제33조에 의한 표시

1) 제작연월일 : 2018년 06월 15일

2) 제작자 : 교육지대㈜

3) 이 콘텐츠는 「콘텐츠산업 진흥법」에 따라 최초 제작일부터 5년간 보호됩니다.

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정답

- 1) [정답] Not just Richard's family, but many of their neighbors were putting up with the same problem.
- 2) [정답] That, however, would have brought another problem, for lions are the top tourist attraction in Kenya and are protected by law.
- 3) [정답] Members of Richard's family took turns guarding the cows in their stable at night.
- 4) [정답] When the lions found out that no one was around, they entered the stable and attacked the cows anyway.
- 5) [정답] He sensed that lions were outside in the dark, but they would not come near if they thought somebody was walking around to protect the cows.
- 6) [정답] To lions, a moving torch could only mean that a person was holding it, which would stop them from approaching the stable.
- 7) [정답] After lots of trial and error, Richard finally created a system of flashing LED lights, powered by an old car battery that was charged by a solar panel.
- 8) [정답] Never again did lions cross Richard's fence.
- 9) [정답] This simple and practical device did no harm to lions, so human beings, cattle, and lions were finally able to make peace with one another.
- 10) [정답] The old man had been found wandering aimlessly on the street.
- 11) [정답] It turned out that he had Alzheimer's,

a brain disease that slowly takes away a patient's memory and ability to think.

- 12) [정답] Following his grandfather, he wondered whether he could do anything more to help him.
- 13) [정답] The problem was that there was no way of knowing where his grandfather would go when he left the safety of his room.
- 14) [정답] If a patient's steps make loud noises, as if walking in wooden shoes, it will wake up the caregiver.
- 15) [정답] Was it possible to send some kind of signal only to the person you wanted to wake up?
- 16) [정답] He finally came up with a system of socks with sensors in the heels and a smartphone working as a monitor.
- 17) [정답] After tries with several different materials, he ended up with a film sensor operating with a small battery.
- 18) [정답] The system Kenneth eventually created worked as it was supposed to.
- 19) [정답] He planned to improve the device and hand it out to Alzheimer's patients as needed.
- 20) [정답] Kenneth's observation of his grandfather's wandering led to the creation of a device that helps people with Alzheimer's.