

Scientists Test Shark Intelligence Using Jazz Music

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Category : Science/Environment

Unlocking Word Meanings

Read the following words/expressions found in today’s article.

1. **condition** / kənˈdɪʃ ən / (v) – to train a person or an animal to behave in a certain way
Example: Scientists **conditioned** dolphins to go after the food when music is played.
2. **discern** / dɪˈsɜrn, -ˈzɜrn / (v) – to recognize something
Example: Some animals can **discern** different sounds.
3. **partial to** / ˈpɑr ʃəl tu / (adj) – favoring one thing over another
Example: My pet dog is more **partial to** human food than dog food.
4. **attuned** / əˈtʃu nd / (adj) – having the ability to understand something
Example: Having a pet cat helped me become **attuned** to cat behavior.
5. **juvenile** / ˈdʒu və nl / (adj) – young
Example: Scientists are studying two-month-old **juvenile** sharks in the laboratory.

Article

Read the text below.

テストするための実験を実施した(experiment : 実験) ジャズを使っでのサメの理解力を(intelligence : 理解力)

A team of researchers conducted an experiment to test shark intelligence using jazz music.

訓練された8匹のサメ(conditioned : 調整された、訓練された) ジャズと食べ物を関連づける(associate with : ～を関連づける) 餌の供給エリア(feeding area : 餌の供給エリア)

Researchers from the Macquarie [muh–**KWAWR**-ee] University Fish Lab in Australia **conditioned** eight young Port Jackson sharks to associate jazz music with food. They did so by teaching the sharks to go to a feeding area while jazz music was played. Five out of the eight sharks were able to **discern** the melody of jazz as they swam to the area where the music played.

8匹のうちの5匹は、～を認識する事が出来た(discern : 認識、識別) サメがジャズとクラシックを識別できるかどうか(differentiate : 識別する、差別化) 2つのジャンルを区別する事は有効ではなかった(telling : 有効、効果的) だが、基本的に サメ達は、ジャズに関しは好んでいた(partial to : ～を好む、～が大好き)

In the second phase of the experiment, the researchers tested if the five sharks could differentiate jazz and classical music. Findings showed that the sharks had difficulty telling the two genres apart. But generally, the sharks were more **partial to** jazz music because they still had a tendency to swim toward the same feeding area when the genre was played.

供給場に向かって泳ぐ傾向があった(tendency : 傾向がある)

Catarina Vila-Pouca, the lead author of the study, believes that the insights from this experiment can help in analyzing sharks’ learning abilities. She is hopeful that becoming **attuned** to these abilities can eliminate negative perceptions of sharks and can ultimately lead to their conservation.

この実験からくる洞察は、サメの学ぶ能力の解析に役立つ(insight : 洞察) これらの能力に同調する事が出来る様になると、悪い認識を取り除く事が出来る(attune : 同調、適合する eliminate : 除外する、取り除く persepction : 知覚、認知)

究極的には、サメの保全につながる(conservation : 保全 ultimately : 究極的には)

8匹の子供のサメ(juvenile : 若い、子供っぽい)

Aside from jazz music, sharks were also found to have the ability to recognize shapes. In a study published in 2014, a researcher from a German university placed eight **juvenile** gray bamboo sharks in a tank and displayed images of a triangle and a square on each side of the tank. Half of the sharks were trained to select a triangle, while the rest was taught to choose a square. Upon recognizing the shapes, the sharks received food as a reward.

三角を選ぶ様に訓練された(train : 訓練) 形を学んだ後すぐ(shape : 形) サメは褒美として餌を受け取った(reward : 褒美)

Viewpoint Discussion

Enjoy a discussion with your tutor.

Discussion A

- What do you think is the importance of studying sharks’ learning abilities? Explain.

- Aside from sharks, what other animals do you think should be examined for their intelligence? Why?

Discussion B

- How can trainers ensure the safety of animals while they are being trained?

- Which animal would you like to train? What skills would you teach this animal?