2 BUDDHA‘S TEACHINGS

INTRODUCTORY TEXT

SECONDARY SCHOOL LEVEL I

Course of lesson
Didactic references
Material 1
Worksheet 1
Answers to Worksheet 1
Worksheet 2
Answers to Worksheet 2
Material 2
Worksheet 3
Answers to Worksheet 3
Material 3

SECONDARY SCHOOL LEVEL II

Course of lesson
Didactic references
Material 1
Material 2
Worksheet 1
Answers to Worksheet 1
Material 3
Worksheet 2
Answers to Worksheet 2
Worksheet 3
Answers to Worksheet 3
Material 4

BUDDHA'S TEACHINGS

This chapter describes the three pillars on which the Buddha's teaching rests: Knowledge, Meditation, and Holding the Level.
It deals with the levels of meaningful conduct on which one achieves liberation from suffering, the attitude of developing for the sake of all beings, and the highest view with which one becomes enlightened. This most commonly used division into **Theravada (school of [religious] elders), Great Way (Mahayana), and Diamond Way (Vajrayana)** refers both to different emphases of the Buddha's teaching and to different levels of application. All three levels of Buddha's teaching are independent paths.

When asked why and what the Buddha was teaching, he replied, "I teach because all beings want to be happy and avoid suffering. I teach the way things are".
Buddha's teaching is extremely diverse. It includes a total of 84,000 teachings that he gave over the course of 45 years. Traditionally, the teachings are divided into three "collections," the "baskets," which from a western perspective can also be understood as three pillars of a Buddhist building. Each pillar is divided into three levels.

The first pillar includes the necessary knowledge about Buddhism. Here it is about all the topics that one can intellectually grasp, study and pass on. If questions arise, one gets the appropriate answers. However, it is not enough for a Buddhist just to know.

Therefore, **the second pillar** refers to the transformation of knowledge into experience. This is done with the help of a rich treasure of different meditations that bring about corresponding insights and realizations. These meditations are practiced regularly so that the knowledge becomes a living experience.

The third pillar focuses on implementation. Everyday life, with all its challenges, distractions, and pitfalls, reveals the extent to which one has actually internalized the teaching as a Buddhist. Buddha taught how to secure the knowledge and experience from meditation and make it stable and lasting.

From another perspective, the teaching can also be divided into three levels. Although Buddha himself never taught this division in this way, different paths or "vehicles" emerged, each focusing on different approaches and methods. It is important to understand that these are different approaches that complement and build upon each other.

The first level of Buddha's teachings, **Theravada**, is the foundation for all Buddhist schools. It addresses people who seek their own liberation and desire to leave the cycle of suffering as soon as possible. For these people, Buddha primarily explains cause and effect (karma) so that they consciously set only causes for happiness and avoid the causes for suffering. With the understanding that positive actions lead to happiness and negative ones to difficulties, one can take full responsibility for one's own life.
Through appropriate meditation methods, the mind becomes calm and stable. Because of the mindfulness that arises, one no longer follows habits that cause suffering. At the same time, the insight grows that the basis of all difficulties - the "I" or "self" - has no independent existence, and one becomes free.
Thus, one becomes an arhat (sanskr.) or "enemy conqueror" who has realized the state of mind tranquility beyond suffering. All mental tendencies that keep him in the cycle of rebirths are defeated.

The second level of Buddha's teachings, **the Great Way (Mahayana)**, is for altruists, people who have power and surplus for others. The motivation in the Great Way is to achieve enlightenment for the sake of all beings and also to lead all beings to liberation and enlightenment. One needs compassion and wisdom for this. One wants to help beings who are caught in the cycle of suffering due to ignorance to achieve lasting happiness. With wisdom one recognizes what the beings need for their development.
The meditations aimed at this involve all beings. In this way one removes the separation between oneself and the world "outside". This is practiced through the so-called liberating actions (sansk.: paramitas). In addition, one develops an understanding or feeling for the emptiness of

things. Emptiness means that nothing arises from itself, but everything is composed and happens in dependence, constantly changing and eventually dissolving.
In order to hold the level of insight achieved through meditation, one learns above all to avoid anger, to experience pleasant things as blessings and difficult things as a learning process. Often used by lay people, this path emphasizes the underlying motivation or attitude. The methods are aimed at perfecting one's abilities to benefit all beings in the best possible way. The ultimate result of this path is Buddhahood, in which all spiritual qualities are brought to full maturity.

The third level of Buddha's teachings, **the Diamond Way (Vajrayana)**, appeals primarily to people who can identify with the goal of enlightenment. One's own development is never separated from the welfare of all beings. At this level, one realizes that Buddha is the mirror of one's own mind and that all enlightened qualities - fearlessness, joy, energetic compassion and wisdom - are already inherent in every human being. This potential is Buddha nature. Nothing needs to be added from outside.
The structure of meditation is focused on identification, on becoming one with enlightenment. As aspects of meditation one uses Buddha forms that express certain qualities of enlightenment and awaken corresponding qualities in our mind. At the same time, one works with the awareness of the mind, beyond form. One's own mind is experienced as rich and playful. Here, everything is fantastic just because it is happening. This is the view of a Buddha, beyond all conditions and limitations.
As a realizer, one practices raising everything to the highest and purest level possible in every encounter and situation. In this way, it becomes possible to experience the richness contained in every situation of life. Ultimately, through identification with one's Buddha nature, all mental veils fall away and one reaches the goal - Buddhahood or enlightenment.
On this path, one finds highly realized teachers, the so-called "realizers" (yogis), who often teach in an exemplary manner using unusual methods and who have detached themselves from restrictive social norms and generally accepted ways of life.

The roof of the building is formed by the highest and most powerful teachings, which directly aim at the nature of the mind. They are called "The Great Seal" (sanskr. Mahamudra) or "The Great Perfection" (sanskr. Maha Ati). Here one practices the unity of foundation (the perfect nature of mind), path (meditation practice) and goal (liberation and enlightenment) - beyond expectations, hopes, fears and conceptual notions. One behaves like a Buddha until one has become a Buddha.

INFORMATION FOR TEACHERS

COURSE OF LESSON – SECONDARY LEVEL II

OBJECTIVES

The students will be able to:

- name the characteristics of Buddhism as a "religion of experience".
- reflect on the intersections between Buddhism and philosophy, psychology, religion and science.
- understand the similarities between Buddhist philosophy and modern physics.
- explain the conditionality of thoughts and feelings.

DEEPENING KNOWLEDGE/TRANSFER	Reflection on reality, form and emptiness Reflection on body, thoughts, feelings	**WS 3 and Answers to WS 3** Students approach an understanding of "emptiness **Material 4** Students sumarize
(OPTIONAL) DEEPENING	Comparison of scientific statements with core points of Buddha's teachings	**Material 3** **WS 2 and Answers to WS 2** Students evaluate the text by asking questions and compare the results
EXERCISE	Buddhas Teaching – Religion or science?	**Material 2** **WS 1 and Answers to WS 1** Students note down characteristics Students compare results
INTRO	What are the points of contact between Buddhism and religion, philosophy, psychology and science?	**Material 1** Students bring in their previous knowledge and define areas

BASIS

What might interest the students about the topic:

- What did Buddha teach?
- How does Buddhism relate to religion, philosophy, psychology, and science?
- Can we still benefit from his teachings today?

NOTE: THE SEC I LESSON PROVIDES A BASIC OVERVIEW OF BUDDHA'S TEACHINGS.

INFORMATION FOR TEACHERS

DIDACTIC REFERENCES – SECONDARY LEVEL II

OBJECTIVES

Students will be able to ...

1. identify the characteristics of Buddhism as an "experiential religion".
2. reflect on the intersections between Buddhism and philosophy, psychology, religion, and science.
3. comprehend the similarities of Buddhist philosophy and modern physics.
4. explain the conditionality of thoughts and feelings.

NOTE: THE SEC I LESSON PROVIDES A BASIC OVERVIEW OF BUDDHA'S TEACHINGS.

NOTES

This in-depth teaching unit deals with exciting points of contact between Buddhism, the humanities and natural sciences. It shows that there are both similarities and differences.

Like most religions, Buddhism has rituals and prayers. However, Buddha's teaching is not a religion of faith, but a religion of experience. There are no dogmas, everything may be critically questioned. One strives with self-responsibility for inner perfection. Buddha's teaching shows a way to overcome the dualistic way of experiencing and the goal is liberation and enlightenment.

Similar to philosophy, the essence and meaning of the world is explained, which has an influence on the shaping of life. However, Buddha's teaching does not remain with the descriptive explanation, but also shows ways how to implement the knowledge.

As in psychology, the aim is to bring about a positive change in behavior so that greater freedom and happiness will result. Buddha's teaching, however, goes beyond this. Through view and meditation, all the enlightened qualities of the human mind are developed, thus bringing the human mind to a super-personal level.

Buddha made statements about the world of appearances 2600 years ago in the Abhidharma Tantra and Heart Sutra: "Form is emptiness, emptiness is form, form and emptiness unseparated ..." Research results of quantum physics confirm these findings: There is no smallest particle, but ultimately everything consists of energy and information (CERN, Large Hydron Collider).

The Buddhist term "emptiness" means that nothing appears from itself, everything is constantly changing and also dissolves again. In the so-called Rangtong description of the world, Buddha explains that there is no smallest basic building block, but things appear. Subject, object and deed are sides of the same wholeness and condition each other, which also corresponds to the latest scientific knowledge.

INTRODUCTION

Material 1 is projected and gives impulses with the question: What points of contact does Buddhism have with religion, philosophy, psychology and science? The students bring in their previous knowledge. If there are few answers, the four areas can be defined.

WORK

The students read **Material 2**. Is the teaching of Buddha religion or science? The task is to find similarities and differences between Buddhism and the respective fields.

The tasks for the students are on **Worksheet 1**. The students discuss in small groups and write down characteristics in the table. **Answers to WS 1** for the teacher offer possible answers.
The results are then compared in plenary.

DEEPENING, optional

With **Material 3**, the students receive excerpts from a scientific essay by René Staritzbichler. The author is a Buddhist and a physicist and wrote his diploma thesis on quantum field theory.

In addition, the Buddhist view of "experience" and "space" is explained in the note.

The students read the text and answer the questions on **Worksheet 2** in partner work, possibly in a division of labor, since the text is quite extensive and demanding. The answers are discussed in plenary.

DEEPENING AND TRANSFER

In this part of the lesson, the general picture of reality is reflected. Our perception conveys to us that things are real. Although everyone knows that the senses are very limited, we consider the perceived reality to be the exclusive one.

Using the sequence of images on **Worksheet 3**, the students explain the emptiness of matter (**top half**).

Thoughts and feelings are also experienced as very "real" and are thought to be real. On closer examination they are just as "empty of any self-existence". One experiences them. How we behave towards them is our free choice.

Using a text excerpt from the Heart Sutra, the students reflect on the conditional level of thoughts and feelings. They formulate conclusions from a Buddhist perspective. Partner work is recommended (**Worksheet 3, lower half**).

Answers to **Worksheet 3** give suggestions.

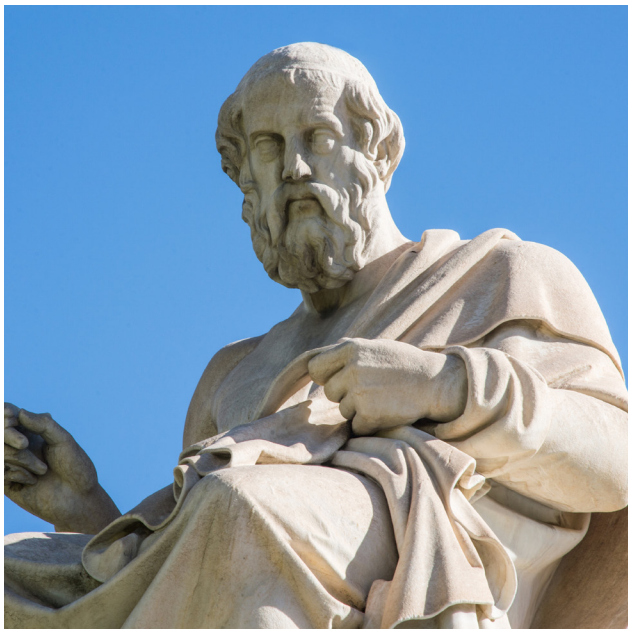
In the plenary, the students exchange the findings of this lesson and formulate a conclusion. The core of this conclusion should be the understanding of the conditionality and transience of all phenomena.
A Buddhist cosmological representation illustrates this insight **(Material 4**).

MATERIAL 1

WHAT POINTS OF CONTACT DOES BUDDHA'S TEACHING HAVE WITH RELIGION AND SCIENCE?



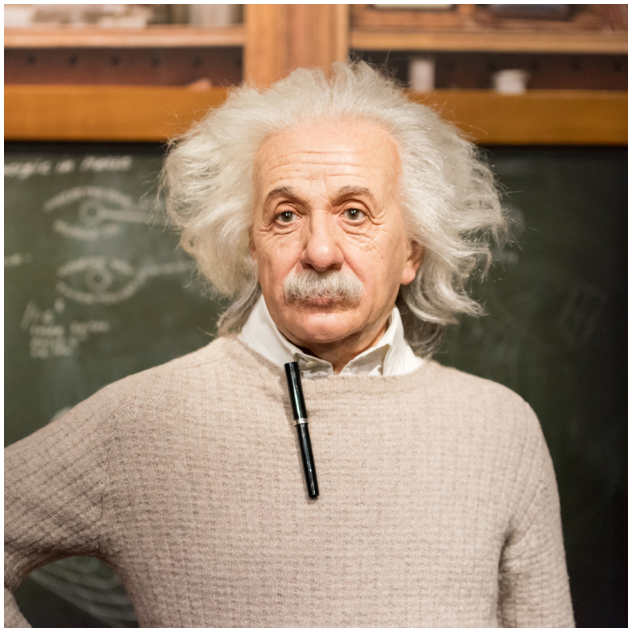
RELIGION



PHILOSOPHY



PSYCHOLOGY



SCIENCE

MATERIAL 2

WHAT ARE THE POINTS OF CONTACT BETWEEN THE DISCIPLINES?

Is Buddhism a religion?

Buddhism is called one of the five world religions. It gives the seekers of meaning answers to the questions about the ultimate truth. In the different Buddhist directions there are different rituals, which often have cultural backgrounds. In Buddhism, there are no dogmas that must be believed or simply accepted. Instead, everything may be questioned. Everything Buddha taught is understood as advice that can be verified by one's own experiences, in meditation and in everyday life. In Buddhism there is no creator god. Buddha is not seen as a god, but as a role model and friend. Everyone can achieve spiritual realization just like him. Buddhism is therefore not a religion of faith, but can be described as a religion of experience. Buddhists themselves experience Buddhism as a method, a path that can be followed. There are teachers who pass on the knowledge and meditation methods.

Is Buddhism a psychology?

Buddha's teachings initially seem to have similar goals to positive psychology: both are intended to benefit people in everyday life, to bring about positive changes, to make them happier, and to help them develop their abilities for the benefit of others. While psychology usually stops when everything goes smoothly in everyday life and people are at peace with themselves again, Buddhism goes further and builds on that. The ultimate goal of Buddhism is to realize the mind, our "experiencer," and to develop the full potential of enlightened qualities: This is expressed through unwavering fearlessness, supreme joy, and super-personal compassion. Knowing that everyone experiences his or her own karma, that is, the result of impressions of past thoughts, words and deeds stored in the mind, leads to personal responsibility. This also applies to stored karmic impressions from previous lifetimes. Through present actions, one is constantly planting new seeds for the future. Through Buddhist mediation methods, old karmic seeds and tendencies are cleared and qualities are developed.



Is Buddhism a Philosophy?

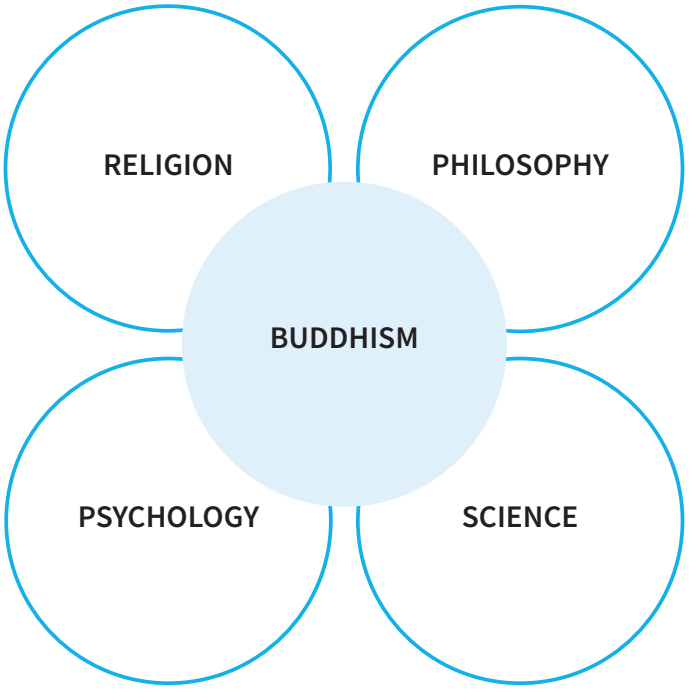
Buddha's teachings form a clear, logical and comprehensible explanatory model of the world. The insights can be supported by arguments. In this respect, Buddhism could also be called a philosophy. Philosophies depend on the spirit of the times and also have an influence on social trends and individual lifestyles. Buddhism, however, is timeless. Buddhism does not stop at theoretical knowledge and abstract explanations, but ultimately goes beyond all concepts and ideas. The application of Buddhist views and meditations in everyday life brings about a permanent change in body, speech and mind: One becomes more relaxed, acts increasingly from one's own center, and thus becomes more useful to others.

Is Buddhism a science?

Buddha examined the world and its phenomena to find out how they really are, not just how they appear to us. Buddha explained how the ego illusion filters perception and colors experience. He showed that there is no independent, material existence in the world of appearances and taught the dreamlike nature of all phenomena. The Buddhist teachings describe how things really are, and furthermore show ways how one can use this knowledge for oneself and others and achieve lasting happiness. In doing so, Buddha never had a claim to sole representation, but he called for not simply believing what he said, but to examine it critically and on the basis of one's own experiences. In this way, Buddha's statements should also stand up to modern scientific knowledge. In fact, there are many areas today where scientific findings and Buddha's statements about the world agree, such as in quantum physics, near-death research, medicine, and perception theory. Buddhism is the science of the mind, combining outer and inner truth.

WORKSHEET 1

BUDDHA'S TEACHINGS – RELIGION OR SCIENCE?



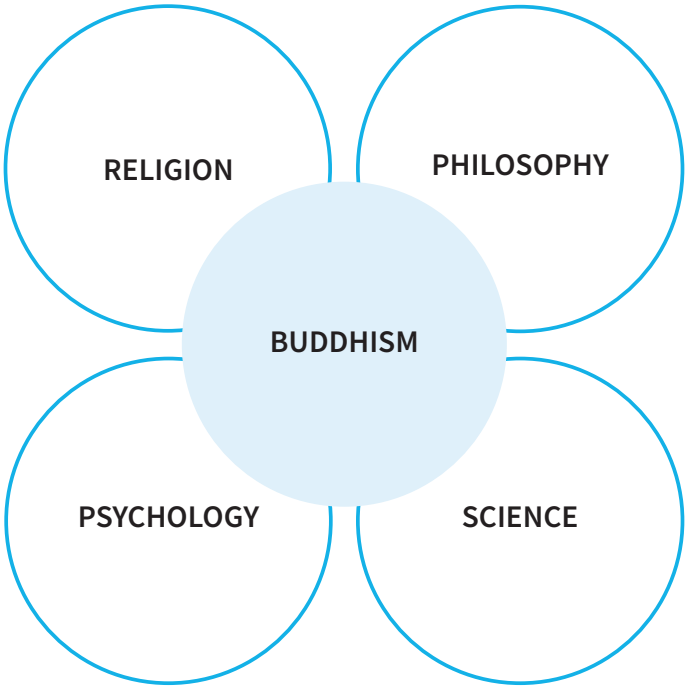
EXERCISES

- Find similarities and differences.
- Discuss in the group and note essential characteristics.

	SIMILARITIES	DIFFERENCES
BUDDHISM AND RELIGION		
BUDDHISM AND PHILOSOPHY		
BUDDHISM AND PSYCHOLOGY		
BUDDHISM AND SCIENCE		

ANSWERS TO WS 1

BUDDHA'S TEACHINGS – RELIGION OR SCIENCE?



EXERCISES

1. Find similarities and differences.
2. Discuss in the group and note essential characteristics.

	SIMILARITIES	DIFFERENCES
BUDDHISM AND RELIGION	World religion, religion of experience, rituals, search for meaning and truth	No creator god, no dogmas, everything may be critically examined, Buddha as friend and role model, path of experience to enlightenment
BUDDHISM AND PHILOSOPHY	Logical system, findings can be supported by arguments, explaining the nature and meaning of the world, influence on the shaping of life	Timeless, going beyond all conceptual ideas, application of Buddhist view and meditation in everyday life, lasting change
BUDDHISM AND PSYCHOLOGY	Happiness, positive change, personal responsibility, use in everyday life, be at peace with yourself, develop skills	Unfold full potential of enlightened qualities, recognize our mind, the "experiencer", memory consciousness with karmic impressions, meditation methods
BUDDHISM AND SCIENCE	Investigation and critical examination through experience, coinciding findings from quantum physics, near-death research, medicine and perception theory with Buddha's teachings	Use insights and knowledge to experience lasting happiness, outer and inner truth are connected with each other

MATERIAL 3

BUDDHISM AND SCIENCE

A comparison of Buddhist statements with excerpts from an essay by physicist René Staritzbichler (italicized in the text)(trans. by the author):

Buddhism is a practical path of practice to bring out the inherent qualities of fearlessness, lasting happiness, perfect wisdom, and active compassion in everyone.

In doing so, Buddha's teachings and the Buddhist practice path are based on 3 pillars:

- Information and knowledge transmission of how our mind works
- Meditation, through which one leaves behind pure concepts and thinking, in order to find an access to the inherent potential beyond the intellect
- Practical application and methods to implement the experiences gained from meditation in everyday life for the benefit of oneself and all others

The goal of Buddha's teaching is to go beyond beliefs and assumptions to an experience of reality with all its possibilities. Buddha experienced insights, which are more and more confirmed by modern science, through meditation and passed them on to his disciples as useful knowledge.

The Buddhist knowledge about the nature of our mind helps to become aware of reality - beyond our own and other people's fixed ideas and constricting feelings that cloud our view of reality. Thus, beyond fears and expectations, it is possible to recognize how our mind works and to gain access to all inherent qualities.

Buddhist knowledge about the mind is therefore not a mere philosophy, which in itself does not change the person, but has a practical use and is confirmed in meditation by one's own meditation experiences and becomes a holistic experience of reality.

Buddha's statement not to simply believe something, but to critically examine it oneself by reflecting, examining, meditating on it, in order to penetrate the knowledge holistically beyond the limited intellect, and then to apply it in everyday life and to examine its usefulness, make Buddha's teaching a critical method applicable to everyone.

Thus, working with the mind in Buddhism is a pragmatic approach to reality i.e., recognizing the nature of all phenomena. The insights must stand up to scrutiny in meditation and prove themselves in practical application in everyday life. In this respect, Buddhism is not a faith, but rather a scientific approach to the mind.

Modern science gains knowledge about the world of appearances with measurable experiments, which are objectified by analysis and abstraction, i.e. a validity is aimed at independently of the respective observer. Despite the different methodical approach, many statements of the Buddhist teachings agree with those of physics.

In what can analogies be found in Buddha's teachings and modern science?

"The fundamental theories - Planck's quantum physics begun in 1901, Einstein's special theory of relativity begun in 1905 - can be assigned, along with more recent findings in nuclear and elementary particle physics, to three Buddhist areas of cognition: "form and emptiness", "cause and effect" [and "observer and reality"], [...]".

The Buddhist concept of "emptiness" of all things means that all appearances or phenomena are in constant change, that space itself, which has inherent consciousness, is constantly creating forms out of itself in infinite variety, which also dissolve again. Phenomena arise and pass away. All phenomena, no matter whether tiny or huge, are thus "empty" of a permanent self-existence.
From Buddha's view form and emptiness thus always belong together.

"FORM AND EMPTINESS"
In our world of experience, there is nothing that has existed in its present state since beginningless time and will continue to exist in this way in the endless future. Everything comes into being and passes away, the form does not remain as it is and therefore cannot be absolute. Its mutability is an indication of the emptiness of things.

However, it would be possible that the form as it appears to us is composed of permanent building blocks that are beyond our perception and that remain eternally the same. Just as one could tear down ugly walls and build a beautiful castle from the same stones: The building would have changed, but the stones would have remained the same. Then beyond our perception, on a small scale, the form would not change - it would not be "empty".

That this is not the case is proven by findings in physics. Matter can dissolve, come into being, and it can change into other matter: During the decay of atomic nuclei, a part of matter is dissolved. It becomes the movement of the fragments, i.e. the fragments move away from each other with high speed. Another part of the matter dissolves thereby into "light" (electromagnetic radiation).

If matter meets its antimatter, they also become "light". Conversely, "light" can change into matter and antimatter. Matter can originate together with antimatter from the "nothing", however, disappears again after extremely short time. There is no matter which cannot be changed. The invisible building blocks of our world of experience are "empty".

[...] There is nothing which is not subject to change. There are no absolutely permanent forms of existence; only "something" which includes form and change ([Buddhistically speaking] form and emptiness), and which we call energy, remains. What happens if there is no form? From the space in which "nothing" is, the vacuum, extremely many particle-antiparticle-pairs arise constantly, without "reason". That matter arises from nothing, massively contradicts the conservation of energy. But there is in the physics of the small, the quantum mechanics, a so-called energy-time-uncertainty. That means, the conservation of energy is valid, but not exactly. For fractions of a second the law can be violated: the shorter, the greater the deviation from the exact conservation, i.e. the more matter is created, the shorter it can exist. The particle-antiparticle pairs created from nothing can exist therefore only very short time, before they disappear again into the space. Since they cannot exist freely, they are called virtual. Virtual particles/ antiparticles cannot arise separately, only as a pair. But they exist, they arise and pass away - and they are detectable!

CAUSE AND EFFECT

Cause and effect is a principle that applies in Buddhism as well as in physics. In the Buddhist view of karma, an effect does not directly follow the cause. In the external world of appearance, an effect can occur years after the cause, but exactly when is not necessarily determined. [...]" From the Buddhist point of view, the mind is unlimited like the all-pervading space that has inherent awareness. This awareness "stores all causes and generates a world corresponding to the quality of the preceding deeds, words and thoughts. The situation in the now, the conditions that one finds, are composed of many actions of the past. And each action will have an effect on the future. But if there were only cause and effect, then one would be at the mercy of an endless, unchangeable sequence of effects, without being able to intervene - without any freedom. Freedom consists precisely in not being subject to conditions in one's actions, not having to follow every thirst, every anger, but being able to break this cycle. Enlightenment means to be free from karma, from cause and effect. [...]"

Cause and effect, according to Buddhist understanding, is an acting reality principle as long as one succumbs to the illusion of being an independent "I" separate from others. If one experiences in meditation that there is neither in thoughts and feelings nor in the body a permanent "I", everything that appears in the space of the mind, "exists" for a time and then dissolves again in the space of the mind, is experienced as the "free play of space". Free from identification with an "ego," one will cease to act disturbed and personally offended or self-centered.

"[T]here is, however, the freedom of decision in the now. And unlike classical physics (by which one usually means the physics before quantum mechanics), the experience of an effect need not immediately follow the cause.

Classical physics sees the world as a "billiard game": If one knows exactly how the shot will come, one knows exactly how the balls will move - and one believed in classical physics to know thus everything exactly. A fixed future without freedom of choice. In the impacts, the balls react immediately and not in the next game. Classical physics and Buddhism contradict each other! On elementary level, in the

quantum mechanics, the view changes and one finds agreement with the Buddhism. For this we go again to the nuclear decay: Roughly said, a nucleus decays because it can, because energy becomes "free". The more energy is released in the decay, the faster it will decay, or the more likely it will decay. But there is nothing that forces it to decay at a particular time. There is no reason why it must decay at a certain time - it lacks an "internal clock" - unlike, for example, a human being, who is seen to be aging and thus the probability of "its decay". For a large quantity of nuclei one can say exactly when for example half of the nuclei will have decayed, the probability becomes a compelling law, which becomes the more exact the more nuclei are present. As with karma, an effect does not immediately follow a cause.

The belief of classical physics that it can know everything precisely turns out to be a fundamental error in quantum mechanics; for example, the future of a single nucleus is in principle unknown."

SPACE AND INFORMATION

"The law of cause and effect requires that causes come before effects. In other words, time must have a fixed direction, namely the one we are familiar with. If time could change its direction, effects would come before their causes. [...] However, there is an experiment in which apparently information is transferred with faster than light speed: The EPR experiment (Einstein-Podolsky-Rosen) was initially a thought experiment to show the weaknesses of quantum mechanics: An atomic nucleus decays into two equal parts. At the same moment you affect one part, the other "knows" about it - even at large distances. In quantum mechanics, they remain one system, one whole, which is why they know about each other even though they have separated. This knowledge is faster than light, although it is not transmitted in the conventional sense by moving an information carrier (for example light) from one part to another. And just because it is not a "moving" transmission, this does not violate cause and effect, the mechanism is of a different kind. [...]"

Similar phenomena are also evident in the experiments about the entangled parts. In Buddhism one speaks of the inseparability of "space and information". This means that for an enlightened person whose perceptive mind is not clouded by dualistic concepts, it is possible to take information inherent in space spontaneously and effortlessly. Even non-enlightened people have access to it again and again, which is especially evident in dangerous situations, for example, when one intuitively has the intuition that something is happening to a close person at that very moment. We are connected with each other through space.

"OBSERVER AND REALITY"

"What is the role of the one who perceives, the observer, in physics and Buddhism? [...]"

By directing his attention - the ability to perceive - away from external and internal phenomena to that which perceives, Buddha recognized the nature of mind. He compared what is perceived to the images that come and go in the mirror and the perceiver to the mirror. The "inner" phenomena such as one's body, thoughts and feelings and the "outer" phenomena such as the surrounding world are in constant change. The mind that perceives is timeless and equal to space. However, there is no dualistic separation between the perceived and the perceiver. They are unseparated and yet not the same. In the Buddhist context one speaks of the "free play of space".

"Since "reality" as such is something difficult to grasp and define, classical physics held to a reality that is impersonal and timeless, that can be perceived by everyone in the same way, at any place and at any time - i.e. a reality that can be described by laws of nature. The observer must have no meaning. Observer and observed are separated, that means the same reality must exist, whether one observes it or not. The rough scale of the senses allows this view: The gentleman with the club is standing in front of you, whether you have your eyes open or not. With hundred million times smaller objects it is a little bit different: On the one hand, because only a measuring apparatus can "see" them. And then such small objects are influenced, changed by every observation. In order to measure, something must take place between object and measuring device, which always has effects on the object. Every observation changes the "reality".

Furthermore, the future of a single object of this size is not determined, which means that already shortly after a measurement one does not know anything with certainty about the object. If one does not observe, one does not know anything definite about

"reality" because it can change unpredictably. These two insights led to the view of quantum mechanics that nothing can be said about a reality unseparated from the observer. [...]"

Source of slanted passages:
René Staritzbichler: Physik und Buddhismus – Ein Vergleich, in: Buddhismus Heute Nr. 31, 2.000 und Nr. 32, 2.001

WORKSHEET 2

PHYSICS UND BUDDHISM

EXERCISES

Read the text in **Material 3**. Highlight essentials visually and formulate answers to the following questions in partner work:

1. Which methodological approach to gaining knowledge does Buddhism use, and which one does science use?

2. How do Buddhism and science relate to the question of whether something ultimately exists permanently?

3. How do Buddhism and physics view the principle of cause and effect?
   Does an effect occur in direct succession to the cause? Is there an aspect of freedom?

4. How does information transfer happen? Does information transmission take time?
   Does information transmission occur simultaneously in spatially separated locations?

5. How do Buddhism and science relate to the role of the observer? Is there a "reality" independent of the observer?

ANSWERS TO WS 2

PHYSICS UND BUDDHISM

EXERCISES

Read the text in **Material 3**. Highlight essentials visually and formulate answers to the following questions in partner work:

1. What methodological approach to gaining knowledge does Buddhism use, and what science?

   - Buddhism: holistic experience through meditation, critical review, application to everyday life
   - Science: measurable experiments, analysis, abstraction, objectification

2. How do Buddhism and science relate to the question of whether something ultimately exists permanently?

   - Buddhism: speaks of the "emptiness" of things, form and emptiness, recognizing everything external and internal as free play in space
   - Science: quantum physics proves demonstrably the emergence and decay, the changeability of particles, a "both and" of particle and wave, virtual particles

3. How do Buddhism and physics view the principle of cause and effect? Does an effect occur in direct succession to the cause? Is there an aspect of free choice?

   - Buddhism: freedom exists in the decision in the here and now and in actions that break old harmful patterns
   - Science: decay of a nucleus is not necessarily at a certain point in time, probabilities apply. There is not necessarily a mechanistic sequence. However, classical physics has a mechanistic world view (billiard game)

4. How does information transfer happen? Does information transmission take time? Does information transmission occur simultaneously in spatially separated locations?

   - Buddhism: information is space, mind is timeless and equal to space, wisdom intersecting all duality
   - Science: quantum entanglement: ponds react simultaneously, regardless of their distance

5. How do Buddhism and science relate to the role of the observer? Is there a "reality" independent of the observer?

   - Buddhism: the perceiving mind, the "experiencer" is not separate from the perceived. Subject, object and action are sides of the same totality
   - Science: quantum physics proves that nothing can be said about a reality inseparable from the observer. Every observation changes the "reality". However, classical physics postulates a reality separated from the observer

WORKSHEET 3

REFLECTING ON REALITY

Our perception conveys to us that things are real. Using the example of an everyday object, the view of reality is examined.

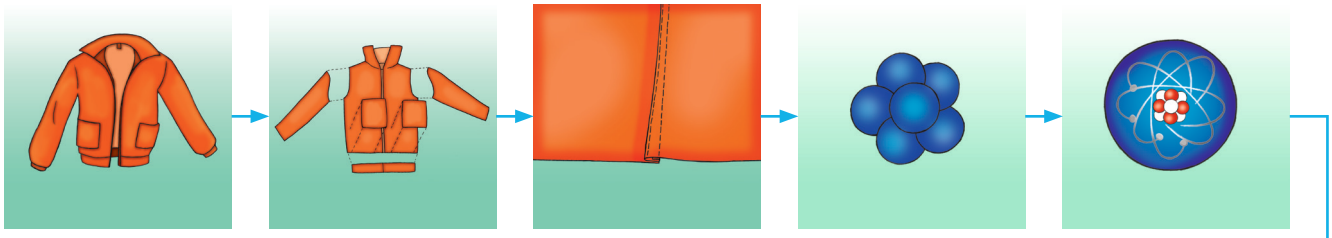


- The jacket is perceived as solid matter, e.g. it can be seen, felt...
- It is subject to a constant process of change, e.g. it ages, gets dirty, tears...
- The jacket fulfills concrete functions: e.g. it warms us.

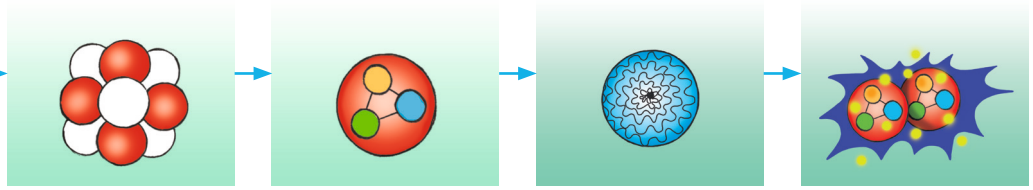
On close examination, there is no jacket "in itself". It is "empty" of existing intrinsic nature and has no ultimate independent substance. The findings of quantum physics prove the changeability of the particles and their arising and passing away. Already the atomic physics showed the "space" between the particles is and that everything is in motion.

EXERCISES

1. Explain this sequence of images. Discuss with your partner. Include the findings from **Material 3**.



Jacket | Sleeves | Thread, Seam | Molecules | Atom



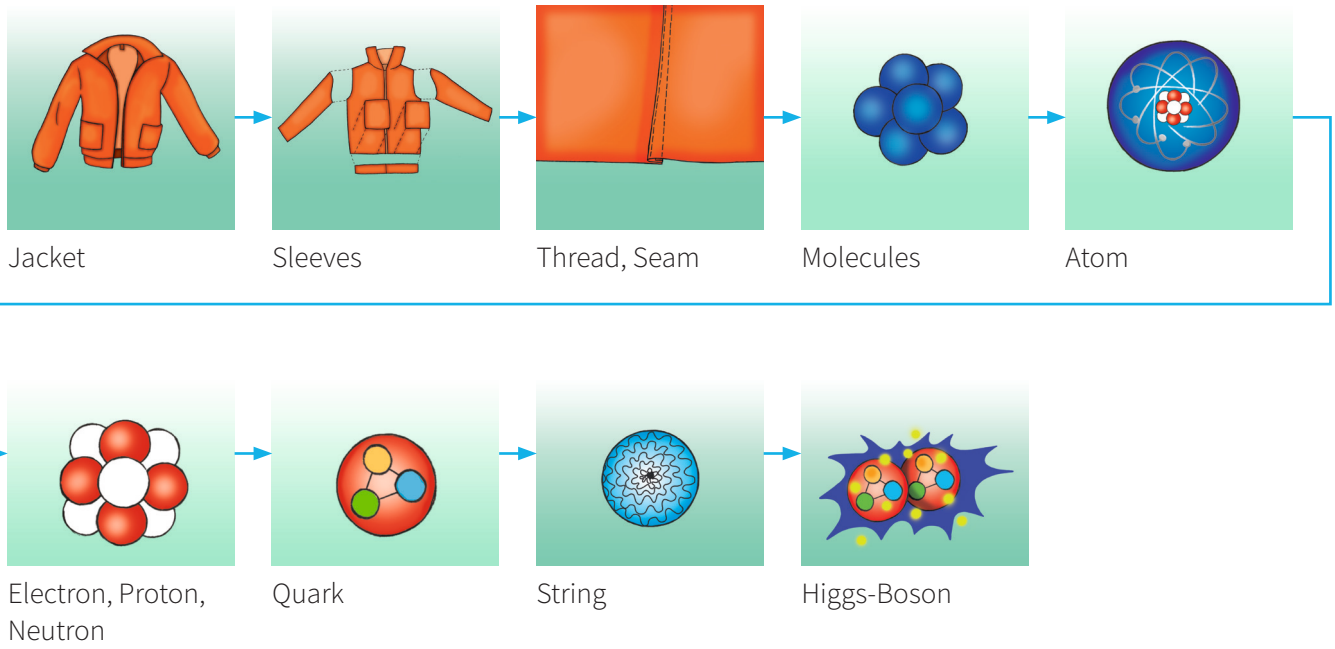
Electron, Proton, Neutron | Quark | String | Higgs-Boson

More than 2500 years ago, Buddha already explained that everything that is put together falls apart again and that the phenomena appear in dependence. In the Heart Sutra it says: "Form is emptiness and emptiness is form. Emptiness is nothing but form. Form is nothing but emptiness. In the same way, feeling, perception, formative power, and consciousness are emptiness."

2. Reflect on what the statements from the Heart Sutra might mean for the "reality" of one's own body, thoughts and feelings.
3. What advice would Buddha probably give to someone who is very attached to his body, who is entangled in his thoughts and in his feelings?

ANSWERS TO WS 3

REFLECTING ON REALITY



TASKS

1. Explain this sequence of images. Discuss this with your partner. Also include the findings from **Material 3**.

   The further you zoom into the microscale, the smaller the particles become. What remains in the end? Space? Energy? - An ultimately solid material reality is not to be found.

2. Reflect on what the statements from the Heart Sutra might mean for the "reality" of one's own body, thoughts and feelings.

   One's own body, thoughts and feelings also change all the time. They have no ultimate self-existence. Everything arises in the space of the "experiencer" and also passes again.

3. What advice would Buddha probably give to someone who is very attached to his body, who is entangled in his thoughts and feelings?

   Everything is not as fixed as it is usually perceived. One's inner attitude holds the key to how one experiences situations. One does not have to cling to one's old habits. Identification with the transient leads to suffering. Realizing that all feelings are impermanent opens the space for new possibilities. Meditate and develop your inner qualities! Be your inner light!

MATERIAL 4

„SPACE IS JOY“

BUDDHIST COSMOLOGICAL REPRESENTATION OF THE UNIVERSE (PARO DZONG, BHUTAN)



"Everything is the free play of space.
Every atom vibrates with joy and is kept together by love.
Everything is fresh and new, full of unlimited possibilities."
(from a Buddhist meditation)